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MONDAY, OCTOBER 2, 1871.

ORIGINAL LECTURES.

INTRODUCTORY LECTURE

TO THE COURSE ON PATHOLOGICAL ANATOMY AT
THE UNIVERSITY OF PENNSYLVANIA.

Delivered September 4, 1871.

BY JOSEPH G. RICHARDSON, M.D.,

Lecturer on Morbid Anatomy in the University of Pennsylvania; Microscopist to the Pennsylvania Hospital, etc.

SINCE pathology is the science of disease, it follows that pathological anatomy must have for its object the investigation of those changes in the structure of organs which constitute disease, including, of course, congenital malformation; and the short series of lectures which I shall have the honor, gentlemen, of delivering before you, will therefore aim to direct your observation to this groundwork of the more prominent departures from health, to which our own bodies, in common with those of our patients, are liable. I well know that the details of this branch of medical science hold forth to students generally but little attraction; yet, if you will favor me with your attention for a short time, I think I can prove to you that no department of the healing art deserves more diligent investigation, because proficiency in none yields more promptly an abundant harvest of that grand prize for all our exertions, success in the practice of medicine.

Few rational beings will dispute that trite aphorism, "The proper study of mankind is man," and your very presence here to-day, as students of medicine, assures me that you need no arguments in favor of its corollary, that the best and wisest application of this study is towards the maintenance of health, the *mens sana in corpore sano*, that great element of all earthly happiness, without which the richest prince, the most powerful king, or even the wisest sage, is more miserable than its meanest possessor.

The pre-eminent value of the study of man as a means for obtaining that *sine qua non* to every enjoyment, health of body and mind, being admitted, it is easy to see, further, that the most effectual mode of securing this blessing is by acquiring the widest possible knowledge of its derangements, as effected by the countless external agencies and forces of nature, and thus learning what noxious influences we need to avoid; because, as every one knows, ignorance of nature's laws no more absolves us from the penalty of their violation than will a similar want of knowledge be accepted by our legal tribunals as an excuse for infraction of their code. For example, the innocent child who eats a spoonful of arsenic, believing that it is sugar, and in ignorance of the divine ordinance which has decreed it to be fatal to our organisms, is as surely and (without assistance) as fatally poisoned, for that ignorance, as if he had committed the most monstrous sin; whilst, on the other hand, an adult who has swallowed the same drug by mistake, if he is well enough informed as to the laws of nature to promptly take an emetic, is saved by that very superiority of wisdom.

Since, then, ignorance concerning causes which produce the pathological changes of disease is continually punished, equally with the blackest of all crimes, by death, and, on the contrary, knowledge of those same causes is rewarded with the highest earthly prizes for resplendent virtue, life and health, it is manifest that our chief interest, our duty, and our privilege as physicians (in order to secure those blessings for our patients, many of whom are as ignorant of common injurious agents as a child can be of arsenic), is

the comprehensive study of disease, with all its innumerable causes, phenomena, remedies, and effects.

Now, in the first place, you may perhaps be inclined to ask how observation of post-mortem changes (the inspection of dead flesh, as a sneering critic calls it) can be of use to you in your study of disease. But you need only remember that alterations of the various organs as seen after dissolution, such, for instance, as those in an ulcerated stomach or a cancerous liver, are necessarily consequent upon other changes, similar, except in being a little less marked, which existed towards the close of life; and you will recognize the fact that they gave rise then to symptoms resembling those which you are or will be daily called upon to relieve. Again, if we consider for a moment what part the knowledge of morbid anatomy, when so attained, has in our art of arts, that of healing, we must, I think, soon perceive that just as normal anatomy shows us the machinery of life and combines with physiology to teach us the healthy movements of that mechanism, so morbid anatomy links itself with pathology in unveiling to us the disturbance of organic action which we call disease.

Perhaps I can best elucidate my meaning, and most forcibly impress the idea upon your minds, by a mechanical illustration. Thus, for example, our own bodies, with all their ingenious contrivances and wonderful adaptation of parts to the various objects they are designed to fulfil, may be compared to some intricate machine, such as a steam-engine, which, when in complete running order, with every valve, lever, wheel, etc. acting in just mutual relationship, represents (except that it is far less complex) a healthy human organism. But let a screw work loose, so as to allow a little leakage at the steam-pipe, or the oil dry up, so as to prevent the free play of a valve, or an eccentric wheel slip a little on the shaft, so as to shorten the stroke of its rod, and we shall have resulting an imperfect action, manifested perhaps by an audible escape of steam, a slower rate of movement, or a loss of operative power,—in fact, the precise equivalent of that derangement of our system which from time immemorial has received the name of disease. If now we suppose a skilful workman called in to rectify the disordered engine, we may see him examine the movements of the machine whilst running fast or slowly, try with his wrench one and another screw-head, and listen here and there for the rush of steam, all these tests being applied to detect the exact seat and character of the little mechanical defect which interferes with the perfect action of the engine, and on which consequently the whole disorder depends.

Now, gentlemen, just as the machinist employs his trained senses to discover the *lesion of his engine* from its symptoms, which are the interferences it causes with the best action of the machine, so we, as rational physicians, should, when called to a case of sickness, devote our keenest perceptions, aided, if needful, by the microscope, the stethoscope, the thermometer, and other mechanical appliances, towards determining the primary *lesion*, the *pathological alteration of structure*, in our patient's body, by the symptoms, that is to say, the departures from typical health, which its interference causes in the functions of his organism.

Another inducement which I can earnestly offer you to pursue with vigor the study of pathological anatomy exists in the fact that by its aid you will often be enabled to gain the confidence of your patient and his friends; obviously a point of vital consequence, because it is manifest that, no matter how well you may understand the cure of disease, humanity is no better off if all sick men are afraid to intrust themselves to your care. As a rule, when, as recent graduates in medicine, you attempt to enter upon the practice of our art, you will frequently find your progress crippled, and

your usefulness obstructed, by a blind, unreasonable popular prejudice against "*young doctors*;" constantly you will discover, to your chagrin, that ignorant quacks and pretenders, *merely because they are older*, have their cures magnified, their shortcomings concealed, and their faults palliated or explained away, whilst you, solely for the atrocious crime of being young men, will not only be upbraided for that which it was beyond human power to avert in the management of a case, but, what is harder still, must submit to having stolen from you the credit which is rightfully your due.

The remedy for this glaring injustice, gentlemen, is best found in that accuracy of prognosis which is a direct result of an intimate knowledge of those pathological changes which occur, first, during the natural course of a disease, and, second, during its progress, as modified by therapeutic and other agencies. According to my experience, which I doubt not will be repeated in the future of every one of you, there is nothing that will do more to dissipate this unreasonable prejudice against youth, and win for you that confidence of patients, which means honor and fame, as well as fortune, than the ability to foretell correctly and accurately the course of disease,—the fact that your prophecy in regard to the time, manner, etc. of recovery or death is **PROVED** to be true by the result of the case in question.

Observe, if you please, that I do not here use the word prophecy in its Scriptural meaning of an inspired prediction, but in its mundane sense of a mere human calculation of opposing powers and forces which war within our bodies; for I believe we can in many cases foretell recovery or death with the same kind, if not the same degree, of certainty as that felt by an astronomer who predicts an eclipse of the moon, or a transit of Venus across the sun's disk, centuries before the epoch at which it actually occurs.

It is true that theoretically such an estimate as I have above alluded to would require for its mathematical accuracy not alone a knowledge of all the agencies which have controlled the growth of an individual man, and consequently of his powers of resistance to a malady, but also of the infinitely varied influences which, modifying his ancestors from the days of Adam and Eve, have left their impress of hereditary tendencies upon his being; and the sum may well seem appalling in its magnitude. Practically, however, our decisions are called for in a multitude of instances where such delicate calculation is not needful, and the merest tyro can recognize the fearful balance on the side of death; as, for example, when a patient with Bright's disease is attacked with double pneumonia, or when general tuberculosis supervenes in a constitution already broken down by long-continued phthisis.

Each succeeding year's experience in the solution of this ever-recurring problem, concerning life and death, will give the true and earnest student greater skill; he will learn to detect hereditary taint on the one hand, and ancestral vigor on the other, by evidences so slight as to be altogether inappreciable to the uncultivated perceptions of a novice; and he can thus glean atoms of truth, to serve as foundations for accurate prognosis, which will frequently enable him to foretell the course and termination of disease, with a certainty that may well seem to the uninitiated like the illumination of a true prophetic fire. And yet, gentlemen, it is only a correctness of calculation, from the most carefully-weighed data, supplied by indications as marvellously faint as those by which an Indian hunter tracks his quarry through the forest,—calculation to which, by long practice, any or all of you may attain, and towards which it shall be my constant effort to lead your steps in this pathway of medical science.

Having now, as I trust, convinced you that acquaintance with pathological anatomy will form a direct and

important aid to success in your chosen profession, let us proceed to investigate these material phenomena of disease; and, since I believe that our studies will thereby be greatly facilitated, I will ask you to commence by entering with me upon a more minute examination concerning the essential nature of that morbid action in which all pathological changes of structure necessarily arise. As a preliminary to this, again, we must, however, first grasp the physiological idea of that *vitality* within whose limits morbid actions are of course displayed. Life, which has been abstrusely defined by Herbert Spencer, in his grand work on the Principles of Biology, "the definite combination of heterogeneous changes both simultaneous and successive in correspondence with external coexistences and sequences," may be with less completeness, but more brevity, characterized as that condition of organized bodies wherein the various functions, such as assimilation, nutrition, excretion, sensation, etc., are in an active state. These simplest phenomena of life are capable of actual demonstration in the lowest forms belonging to the animal kingdom, as for instance in the *Amœbæ*, those minute particles of bioplasm so familiar to microscopists. Of course the functions of development, growth, reproduction, locomotion, and so forth, which are generally in the animal kingdom the attributes of life in some of its stages, must usually enter into our consideration of the subject, although they are not essential to the idea of vitality.

Life may be either normal,—that is, nutrition, excretion, etc. may be so proportioned to one another that the organism possesses the greatest perfection of each of its powers, and then enjoys what we call Health,—or the various functions above named may bear a *disturbed* or *abnormal relation* to one another, constituting the condition we denominate Disease, the general, not quite universal, index of which in our race is Pain. Here, gentlemen, you have your life-work set before you almost in a single sentence, and it is as well the great business of our high and noble calling, from the days of Hippocrates down to the end of time, namely, to obviate in suffering humanity those disturbances of bodily action which constitute Disease, and to relieve, or at least palliate, their eloquent appeal for succor,—*Pain*. No earthly service can win for you a richer reward from the people of all nations and all generations; no human gratitude can compare with that poured forth by patients who have just been delivered from the agony of physical pain. How fortunate it would be for us, gentlemen, if it would only last!

Since disease essentially consists in some pathological change, involving a disturbance of assimilation, excretion, etc.,—in two words, is *Disturbed Life*,—it is evident that the causes of disease are any agencies whatsoever which produce such derangement, including, of course, all the innumerable powers and forces which surround us. Thus, the excess or privation of the air we breathe, the light and heat which promote our assimilation of food, the electrical forces which modify our nutrition, any of the myriad diverse influences which may be brought to bear upon and affect the growth, etc. of our frames, are at times the causes of disease.

Whatever insurmountable objections may be urged by theologians and sociologists against generally accepting the plausible doctrines of the development theory, I venture to assert that two of its primary dogmas, long dimly recognized in medicine, are capable of such application as to throw a flood of light over many obscure passages of our acquaintance with the causes of pathological alteration in our bodies. The first of these, the law of heredity, claims to account, you know, for the persistence of racial and family types; the second, the law of individual variation, professes to explain the occurrence of new varieties, which may

or may not become permanent. The evolution hypothesis, as I need scarcely tell you, gives a reason for the development of the higher or improved type, in the fact of its being fitted for a more perfect and complete life under the circumstances (climate, supply of food, natural enemies, etc.) which surround it; it accounts for each step in this progressive march of improvement, by the well-known tendency of offspring to vary slightly from the form, size, and so forth, of their progenitors, and the "survival of the fittest" of these varied forms, and of their progeny; but it seems to have been in great measure overlooked by medical men that, on this supposition, for every variation towards a higher, that is, a more perfect, type, the pendulum (to use a chronometrical simile) swings at least as far in the opposite direction of degeneracy, and some imperfection is implanted in others of a family, which increases the liability to death, although it may not eventuate fatally until old age creeps on the individual, or even until it accumulates power enough, by frequent or constant repetition and increment, during the lapse of centuries, to manifest itself in the tenth or the fortieth generation of his descendants.

Now, although, on the one hand, I think that the most ardent evolutionist must, if candid, admit that his hypothesis, as applied to the far-distant epochs of all prehistoric time, is utterly devoid of any absolute proof, and indeed is directly contradicted by some seemingly indisputable facts, yet, on the other hand, I believe we, in a like spirit of candor, must acknowledge that the theory of development, in its limited application to minor variations, accords remarkably with the events of our own era, daily transpiring before our eyes; and assuming, therefore, that this doctrine contains at least some grains of truth, it becomes obvious that it is with the vast army of degenerated and degenerating human beings, above referred to as on the road to extinction, that we physicians have to deal, since society, as now constituted, requires us to set ourselves against the course of nature (which on this theory calls for the speedy death of the sickly and the weak), because, as a rule, every man chooses his own life, health, and pleasure at the expense of deterioration for his race.

Hence, just as the evolutionist philosopher may claim to have obtained a clue to the mysterious development of organic life, through past ages, upward towards a higher type, in that pregnant phrase, "the survival of the fittest," so we, as physicians, may discover a universal key to those problems of hereditary disease among which our life-work is cast, in its antithesis, the funereal fiat which decrees for individuals, families, and races, alike, THE EXTINCTION OF THE UNFIT.

Moreover, we may deduce from this conception of all hereditary and diathetic diseases as being constituent and essential parts in the harmonious working of the eliminative element in nature's grand law of progress, the secret cause of brutes being so much more healthy than ourselves, since the ordinance which commands, in every kind of created beings, the destruction of the unfittest organisms, shortens, among animals and savage men, the action of that divine curse according to which the sins of the fathers shall be visited upon the children unto the third and fourth generation; by rapidly destroying, when unhindered through human devices, the weak and sickly, and also by preventing them from propagating their varieties, which are comparatively unfit for existence,—thus, with superhuman wisdom and certainty, keeping the race healthy and free from the taint of disease. As an illustration of this doctrine, consider for a moment how medical science has helped to change the original process of childbirth, which, you know, among animals or savage women is easy and relatively painless. Without physicians, a mother, savage or brute, whose pelvis varied much in

the direction of unusual narrowness, would either bear still-born infants, and so fail to perpetuate her deformity, or (what would yet more efficiently accomplish nature's purpose of extinguishing the unfit variety) would herself perish in the pangs of travail. In civilized countries, however, by the aid of forceps, premature labor, and Cæsarean section, progeny of such unsuitable mothers has for generations been saved alive, and sent forth into the world to marry and procreate sons and daughters, who in their turn transmit this pain-producing idiosyncrasy, until at the present day multitudes of American and European families are infected with a hereditary tendency to narrowing of the pelvic straits, and the consequent fearful aggravation of parturient suffering.

Following up this view still further, I can see no reason to doubt that pathological variations of internal structure, which are conditional causes of disease, may be now handed down from parent to child, just as the peculiarities of feature, form of the skull, etc. of the Aryan and Semitic races have been transmitted from generation to generation; and in considering this subject it has occurred to me (although, since the idea regarding this valuable medical bearing of the Pangenesis theory, if not new, is certainly original, I give it to you only for what it may prove to be worth), it has seemed to me, I say, that an hypothesis inculcating the *inheritance of microscopic peculiarities* of formation would do much towards further explaining many obscurities concerning the way in which hereditary idiosyncrasies of disease occur. Thus, for example, a congenital smallness of the arteries supplying the feet may be the direct cause of senile gangrene coming on when the powers of life become feeble in advanced age; and, on the other hand, unusual width, for instance, of the bronchial arteries, hereditary in some families, may, by the freedom with which those arteries supply blood, predispose to active inflammation and lead to repeated attacks of pulmonary disease; or, again, an inherited narrowness of the smaller bile-ducts, discoverable only by the microscope, may tend to produce hepatic disorders. That microscopic groups of cells are controlled by hereditary influence is proved by the fact that individual hair-follicles can be, by inheritance, so modified during development as to produce zebra-stripes in crossing that animal with the horse, and that additional feather-matrices along the legs are transmitted in breeding from the bantam variety of domestic fowls. I think, therefore, we may rest assured that minute aggregations of cells, which go to make up the tissue of tiny nerves, blood-vessels, ducts, etc., are ruled by hereditary influence, just as we know that the arrangements of larger groups of cells, composing the Bourbon forehead and the Hapsburg lip, have been handed down from father to son in those dynasties for many generations.

As an illustration of these minute structural heirlooms producing disease, I may mention that I have seen in my own practice a mother and her three children all sufferers from an affection of the heart (congenital in the second generation), whose physical sign was a rough, diastolic, basic murmur, indicating, apparently, imperfection of one or more leaflets of the aortic valve; and doubtless many similar examples have already, or will ere long, come under your notice. Whole lectures might easily be occupied in discussing the bearings which this important phase of the development hypothesis may have or has upon our science; but I must content myself at present with thus merely hinting at its value to us as physicians, and with the hope of recurring to it for a few moments, under the head of Diathesis, when I come to speak of tubercle.

Although it is foreign to my subject, perhaps I may be pardoned for a brief suggestion that the *mode of utilizing* this acquaintance with nature's occult destructive operations is by counteracting these tendencies to death

in that incipient and feeble stage where a wise and close scrutiny, enlightened by this knowledge of natural laws controlling inherited disease, will often enable us to detect them. Thus, for example, the scions of a family journeying in the tubercular highway to extinction should be supplied with the most nourishing food, the purest air, and the most carefully-regulated exercise, encouraged to expand their lungs and develop their chests, and jealously guarded against catarrhal attacks, which, when they occur, must be treated with the most scrupulous care; heirs of a race which is travelling the gouty road to destruction ought to be subjected to suitable anti-arthritis agencies, selected from both hygienic and therapeutic influences; infants who creep along the syphilitic downward path to death need to have the virulent poison in their blood eradicated by judicious administration of the iodides and of mercurials; and so on throughout the whole catalogue of diathetic diseases.

And here let me urge, gentlemen, that you do not needlessly confuse your idea of disease by attributing to it any essentially incomprehensible nature. Excepting, of course, those cases of providential interposition (such, for example, as that commemorated by the Liars' monument, in a northern town of England) where Omnipotence interferes for a moment with the otherwise immutable ordinances which He has appointed for the government of the universe, all structural changes constituting disease arise, as I have already intimated, from the operation of fixed and determinate laws.

For instance, the entrance of a splinter into my flesh, and the abscess it may cause, are as much the effect of physical forces, which can be accurately calculated and avoided or counteracted when we have sufficient data, as the bruising of my hand should I deliberately strike it against the edge of this table; the penetration of an itch-insect into the skin, and the subsequent eruption and itching, are, again, as much the effects of physical force as the entrance of a splinter into the flesh; the introduction of *trichina spiralis* by the eating of diseased pork, and its consequent grave or fatal constitutional disturbances of life, are likewise as much the result of physical influences as the penetration of the itch-insect; and the inhalation and ingestion of the poisons (whatever they are) which produce ague, cholera, or typhoid fever, with their effects, belonging as they do to exactly the same category, are just as easily escaped, if we have the wisdom and take the care to avoid them; and, failing this, the resulting maladies are just as readily cured, if we know how to cast their exciting causes out from or to destroy them within our systems.

Furthermore, lest any devout fellow-Christian be tempted to accuse me of desiring (as it formerly was phrased) to fly in the face of Providence, permit me to add that I believe it is just as much our religious duty to guard our health and life, as God gives us knowledge so to do, against all these noxious influences, as it is to refrain from plunging into deep water if we are unable to swim, and as it is our duty to shield ourselves from the rain of heaven with sufficient fixed or movable shelter, or to protect ourselves against the thunderbolts from on high by means of the requisite electrical conductors.

Here, gentlemen, is the great field of labor towards true advancement of our science, not only for you and me, but for our descendants in the medical profession to the remotest posterity. There are a few diseases, such as Scabies and Favus, the causes of whose constituent pathological changes we know, and can remove with the same certainty with which we pluck a splinter from the flesh; there are a few others, such as Ague and Syphilis, whose causes physicians generally are ignorant of, but for which we possess antidotes, like quinine and mercury; but the great majority of maladies we as yet fail to trace to their immediate origins,

and must for the present rest satisfied with treating only by relieving their most prominent symptoms, instead of at once eradicating the sources of disease.

Nevertheless, I am sure that, with the exceptions named above, for every twinge of pain, every unsightly deformity, and every premature death, proximately terrestrial causes do exist, which solely the thick cloud of our pitiful ignorance hides from our sight, and which, if seen, we could escape with the same kind of ease that saves us when we step aside from the path of a locomotive or avoid contact with a syphilitic sore. It is for you, gentlemen, to aid in lifting a little corner of this veil of darkness, and so to pave the way for our descendants in the healing art that they may penetrate farther into the boundless arcana of nature, and by wiser means and better-chosen remedies, throughout countless ages yet to come, diminish the sad sum total of human suffering in our world.

From the conception of LIFE, as the aggregated functions of the organism, and HEALTHY LIFE, or HEALTH, as the combination of these functions in that proportion which is consonant with the greatest perfection of the individual, while DISEASE consists in the disturbance of one or more functions and of their mutual relationship, you perceive, I trust, the exact scope of my original definition, that morbid or pathological anatomy (*i.e.* the anatomy of diseased structures) has for its subject all those unhealthy and abnormal changes in the tissues that arise from whatever cause which, in acting, disturbs any of the bodily functions.

For example, to recur to the homely illustration of a splinter in the flesh, the ligneous particle, pressing upon the tiny blood-vessels around it, disturbs the function of circulation, which was previously going on in a normal manner, and thus, as we shall see in the next lecture, sets up inflammation in its immediate neighborhood, becoming therefore a cause of disease. The structural changes which occur during the progress of inflammation, recognized either by the naked eye or by the aid of the microscope, form the morbid anatomy of the process, and constitute a kind of type of the alterations of tissue which it is my province to present to you and to explain. In doing this, gentlemen, I shall, as far as possible without trespassing upon the departments of my friends Dr. Tyson and Dr. Pepper, endeavor to so link the external characters with the microscopical appearances, and both with the clinical symptoms, as to somewhat relieve the tedium of this "meditation upon death," and at the same time contribute to that accuracy of Diagnosis and Prognosis which, as I have already told you, seems so pre-eminently important to every physician, and especially to the young practitioner.

THE LESIONS OF ENTERIC FEVER AS AN OCCASIONAL CAUSE OF PERMANENT INJURY TO NUTRITION.—In a paper on this subject read before the last meeting of the British Medical Association (*Brit. Med. Journal*, August 26), Dr. T. Clifford Allbutt drew attention to the convalescence from enteric fever, which was well known to be often tedious; and he raised the question whether the specific lesions of that disease, affecting as they did the instruments of absorption, might not sometimes be the cause of permanent marasmus. In enteria, the local mischief not only falls upon the patches of Peyer in the ileum, but spreads itself throughout the network of the mesentery. Any disease, therefore, which interfered with this system, like enteric fever within it, or chronic peritonitis outside it, would have its visible effect in hindering the absorption of fat and in preventing the laying on of adipose tissue. These considerations occurred to the author in consequence of his advice being sought in several cases of marasmus pure and simple, without local disease, without fever, and without adequate loss of appetite. In all of these a severe attack of enteric fever had preceded the marasmus.

ORIGINAL COMMUNICATIONS.

OSTEOLOGICAL NOTES.

BY HARRISON ALLEN, M.D.

I HAVE amused myself at odd moments in looking over cabinets of bones, and have noted down a few observations on the variety of osseous forms, both in health and disease. I would have them read in the spirit with which they have been prepared; not asserting in their behalf much that is either new or striking, but, for all that, trusting that they may prove to be at least interesting.

I have thought best to group my observations under distinct headings, each of which will serve as a title for a separate essay. They are as follows:

- I. The facial region.
- II. The senile skull.
- III. The base of the skull.
- IV. The long bones in health and disease.

I.—THE FACIAL REGION.

In the fall of 1868 a young man presented himself at the Wills Ophthalmic Hospital suffering from the effects of a serious injury of the upper portion of the face. A premature explosion of a blast had destroyed the vision of both eyes, and had broken in the bones composing the inter-orbital space, thus exposing a large cavity, evidently in the position of the ethmoid bone, which was filled with granulations. The face was much discolored by grains of gunpowder. The point that most interested me at the time was the fact that the man could eat nothing of a solid character: indeed, he could not masticate at all. The entire upper jaw was freely movable upward in the face. The teeth, however, were firmly rooted, and none were absent. I had previously noticed that skulls which had lain for a long time in exposed localities exhibited oftentimes entire destruction of the interior structures of the face, while the inter-orbital space remained intact and the form of the face was thus preserved. It would seem, therefore, that by destruction of this space the shape and function of the face are virtually destroyed, and, conversely, that no degree of mutilation consistent with preservation of the integrity of the inter-orbital area disturbs the facial contour.

The literature of osteology contains little with reference to the architectural value of this space. Ward, in his elaborate monograph, is content with remarking "that the thick bony arches [of the face] are well adapted for the resistance of mechanical violence, while its interior is constructed of fragile laminæ and slender processes, extremely irregular in form and disposition. The rationale of which scarcely requires explanation." Mr. Hilton, in his essay on "The Bones of the Head considered in Relation to the Functional and Anatomical Associations," confines himself to the brain-case, mentioning the face only as influenced in form by the growth of the sphenoid. Humphreys and Hyrtl are silent on the subject. In Holden's Osteology (p. 79) is found the best description of the bones between the orbits. The author speaks of the nasal processes of the superior maxillæ as supporting the nasal bones and contributing to form the inner margins of the orbits, and adds, with great justice (p. 109), that the immobility of the upper jaw depends upon its fixity by means of three buttresses,—the *nasal*, the *zygomatic*, and the *pterygoid*. The French authors, *vide* Malgaigne and Richet, follow this method essentially.

The face, as all will agree, is designed to afford protection to the eyes, nose, and teeth. Of these, the first-

mentioned demand nothing for their well-being beyond the cavities through which they are approached and within which they are accommodated. Thus, the eyes and nose find in the orbits and nasal scrolls respectively everything essential to the performance of their functions as visual and olfactory organs. The *teeth* alone demand something beyond their sockets for the due enacting of their part. Muscles to move the lower jaw may take their origin some distance from that bone, and the force brought therewith through the lower jaw is expended throughout the entire facial region. Bearing this in mind, may we not consider that the facial region is a natural one, and that the great idea governing its construction is to protect the teeth and aid them in their work of mastication, and that the orbits and nasal chambers are of quite secondary value? The temporal fossæ and the malar bones are thus *functionally* facial, since they would not have existed but for the muscles (temporal and masseter) which arise from them.

In many animals the temporal fossæ are so extensive as to meet at the vertex; with such the orbits are not distinct from the temporal fossæ. With others, however, such as man himself, having a higher cerebral development, the muscles in question are unable to secure from the sides of the brain-case the purchase obtainable from the sagittal crest. To obviate this difficulty the temporal fossæ are deepened anteriorly, and the greater wings of the sphenoid bone and the orbital process of the malar bones are produced to secure by their union sufficient space for the origin of the temporal fibres. Thus the parts composing the outer walls of the orbits are seen to have "temporal" significance. The same principle may be applied to the zygomata, which in this sense can be said to have "masseteric" significance, since the masseteric muscles give them expression.

Each external angular process of the frontal bone lies in a line corresponding to the vertical axis of the malar bone and the angle of the lower jaw. Two of the articulations of the malar bone, viz., behind (with the zygomatic process of the temporal) and in front (with the malar process of the superior maxilla), are designed to resist a force operating from beneath; the remaining articulation, that with the frontal bone, is weaker, and has relations, as already seen, chiefly with the temporal muscle.

Turning to the anterior aspect of the facial region, we observe that the immobile upper jaw is forcibly struck from beneath, in every act of occlusion, by the mobile lower jaw along the line of the dental arch. To receive and distribute this force we have on either side two osseous pillars,—the root of the malar process for the molar teeth, and the ascending process for the canine tooth. These, however, are not of equal value, for "the bite" is not accomplished either at the same time or in the same manner. The lower jaw being composed of two curved levers uniting at a central symphysis, the side of each lever is seen to be stronger than its curved incisorial end. It is actually strongest at the position of the canine and first bicuspid tooth. It is at this point—the seat of prehension—that the main shock of "the bite" is received, and thence distributed along the axis of the canine tooth to the anterior border of the lachrymo-nasal groove (turbinate crest), which in turn transmits it to the outer and thickened border of the ascending process to the inter-orbital space, where it is broken up, the main portion continuing perhaps along the anterior wall of the frontal sinus to the vertex. A line drawn upwards from the axis of the socket of the canine tooth will, if the dental arch be not altered by loss of teeth or malformation, lie over the ascending process at its orbital border. This line may be appropriately called the *canine pillar*. The *molar pillar*, judging from the force of occlusion of the jaws

at its site, would at first sight appear to be stronger than the former. But in reality it is not so. A moment's consideration of the shape of the molar tooth with its three divergent fangs is conclusive to the effect that the force of "the bite" is here at once diffused, and has but a remote relation with the malar process, which, as has already been seen, entertains a relation almost exclusively with a force acting from beneath. Besides, the "grinders" do not require the same axial support as the "seizers." The incisor series is weak and unimportant. The teeth cut, as the name implies,—the lower teeth slipping behind the upper. The unpleasant sensation when these teeth are opposed edge to edge is due to the absence of support, save that which they receive from the insignificant intermaxillary arch.

Now, the space between the line of power on the side of the face and the lines of resistance on the front of it, being as it were one of comparative quiet, is selected for the position of the orifices of escape for important nervous and vascular trunks. May we not in this way explain the familiar fact that all these foramina—the supra-orbital, the infra-orbital, and the mental—are on the same vertical line?

By the light of the above facts, how meaningless become many of the terms employed in the description of the face! The central, weak, unimportant sinus of the superior maxilla is called the body. A recent slipshod writer gives the impression that the ascending process is hollow (!) The same processes are alluded to by Holden as though their chief use was to be found in supporting the "true" nasal bones. We have seen that this must be a small part of their work. The *true* nasal bones are the nasal scrolls, and the nasal bones, so called, are but opercular ossicles to the former, and in man these are rudimentary.

As practical points in this connection may be mentioned the effects of removal of the lower jaw upon the shape of the upper jaw. The force maintaining the curve of the dental arch being in such instances absent, the alveolar processes fall inward, notwithstanding the patency of the roof of the mouth. This is well exemplified in a case of gunshot wound to the lower part of the face, recorded by Ribes (*Dict. des Sciences Nat.*, 1818, xxix. 425.)

In conclusion, it may be suggested that a review of the condition of those individuals upon whom amputation of the lower jaw has been performed would be interesting, as would also the results *in toto* of those cases where naso-pharyngeal polypus has been removed by depressing the face after cutting through the root of the nose.

ELECTROLYSIS.

Read before the Philadelphia Hospital Medical Society, May 20, 1871.

BY T. D. DAVIS, M.D.,

Resident Physician.

THE destruction of morbid growths by means of electrolysis has attracted a good deal of attention in this city for the past few months. The difficulty of procuring any reliable information concerning its efficacy and mode of action induced Dr. R. D. Murray and myself to make some experiments on dead tissue and animals. The results are substantially as follows. Eight experiments were made with a battery made by Stöhrer, of Dresden. This gives a continuous current from thirty small cells, each cell having one carbon and one zinc plate. The fluid used is dilute sulphuric acid,—one part to eight of water.

1. Two steel needles, the thickness of knitting-needles, connected with the battery, were introduced into the tissue of

a healthy liver, within half an inch of each other. Immediately afterwards bubbles of gas commenced to issue from the cut surface of the liver, which was nearer to the points of the needles than the place of their introduction. In four minutes the needle connected with the negative pole became very loose, and bubbles of gas escaped around its point of entrance. In five minutes the needles were withdrawn, the negative one coming away easily, while the positive one, which was blackened and roughened, was somewhat adherent. On cutting across the track of the negative needle, a cavity, one-quarter by one-eighth of an inch in diameter, was discovered, surrounded by a darkened gelatinoid tissue, one-eighth of an inch in thickness. Extending from this to the point where most of the gas escaped was a mass resembling that surrounding the cavity, looking more like softened glue than healthy tissue. The track of the positive needle was black and charred, but the tissue immediately surrounding the point was firmer and whiter than in other parts.

2. The needles were introduced as before to a depth of three-quarters of an inch, and approached within half an inch of each other at the points. At the end of one minute gas escaped from about the negative needle. In three minutes the point of entrance of the positive needle was darkened, and in seven minutes gas escaped from it. At the same time the negative needle became loose, and gas ceased to come to the surface in bubbles. At the end of ten minutes the needles were removed, and, on section, their tracks presented exactly the same appearance as in the first experiment. The change of tissue was, however, somewhat more extended. The tissue between the needles, except immediately around them, preserved its original appearance.

3. The needles were reintroduced and kept in twelve minutes, but the tissue presented no new features, except that the changes were somewhat greater.

4. They were next inserted into a dense fibroid tumor of the uterus, the needles penetrating to the depth of half an inch, and being three-quarters of an inch apart at their points of insertion, but gradually approaching to within half an inch of each other. Immediately afterwards a crackling noise was heard, like that produced by frying meat, and soon from the point of entrance of the negative needle bubbles commenced to issue, until a sphere of white foam was formed half an inch in diameter. On removing the negative needle at the end of seven minutes, a white foamy fluid exuded from the opening, and a black or darkish fluid from the opening left by the withdrawal of the positive needle. Around the negative needle the capsule was dissected up, the tissue beneath being very soft, while it was darkened, dried, wrinkled, and contracted around the positive needle. On section, the track of the negative needle was surrounded by a transparent jelly-like mass, the original tissue of the tumor having been yellowish-white, opaque, and very firm. Around the course of the positive needle the tissue was whitened, dried, and friable, cutting like cartilage. The temperature was increased, but it was not so high as that of the hand. There were no connecting lines of changed tissue between the two needles.

5. The needles were next introduced into the fundus of a uterus, at about the same distances as in the former experiments. They were allowed to remain for fifteen minutes, at the end of which time the temperature of the tissue between the needles was only increased from 60° to 86° F.; yet the tissue around the negative needle was reduced to a jelly-like consistence, and that around the positive had become dry and hard as before.

6. The needles were introduced two inches and a half apart, and to the depth of an inch, in the mammary gland of a woman who had been dead only an hour. Soon after their insertion a lobulated tumefaction arose about them, mostly above the point of the negative needle, and a fizzing sound was heard. The needles were withdrawn in twenty minutes. On examining the body several hours afterwards, the point of entrance of the positive needle was found surrounded by an area of dry leathery skin of a light-brown hue, one inch in diameter; that of the negative needle by wrinkled skin of normal color, one-eighth of an inch in diameter. The skin surrounding the point of entrance of the negative needle was blue. Around the track of the positive needle was a hard lump the size of a walnut, while around that of the negative the glandular tissue

was condensed; a whitish-yellow fluid escaped from its opening, and around its point was a cavity of sufficient size to contain the first joint of the middle finger. The wall of this cavity was three-eighths of an inch thick, condensed, and of a white color externally, and internally surrounded by a gelatinoid substance. The track of the positive needle cut like cartilage; the tissue around it was white, very tough, and slightly elastic. A brownish track connected the points of the two needles.

7. The positive needle was introduced into the other breast of the same body, to the depth of an inch, and the negative pole applied externally by means of a charcoal electrode covered with dampened muslin. The current was continued for ten minutes. The tissue surrounding the point of entrance of the needle was hard and brown for about one-eighth of an inch. The track of the needle was blackened, and the tissue yellowish and friable for the distance of one-quarter of an inch.

8. The needles were introduced into the oedematous scrotum of a man dead but a short time, and retained for half an hour. The changes produced were the same as those detailed in the preceding experiment, except in extent.

The remaining experiments were made with a fifteen-cell Bunsen battery, furnishing a continuous current, and holding five quarts of nitric and two pints of sulphuric acid diluted twenty times.

1. The needles were introduced four inches apart to the depth of one inch in a liver. In one and a half minutes there appeared white bubbles at the point of entrance of the negative needle, which kept increasing until the needles were withdrawn, at the end of twenty minutes. The negative needle came away easily, the positive with some difficulty. The track of the positive needle was slightly blackened, and the tissue for one-quarter of an inch around the negative needle was softened and broken down. There appeared no line of connection between the two.

2. In this experiment fourteen cells were used, arranged for quantity of two, the needles inserted into the liver used in the preceding experiment. The same characteristics appeared as before, but not so marked, and the lesions after twenty minutes were only about one-half as extensive as in the former experiment.

3. The battery was rearranged as in No. 1, and the needles kept in a liver for three-quarters of an hour. At the end of that time a fluid ounce of white frothy matter had accumulated at the point of entrance of the negative, and about a teaspoonful of blackened fluid at that of the positive needle. On section, the tissue around the positive needle was broken down to a softened grayish mass, through which were scattered little hard pellets like grains of sand. Around the point of the negative needle was a large cavity besides that caused by the breaking down of tissue, *as if it had been dissected up by gas*.

4. A cat was put under the influence of chloroform, and the needles introduced into the right thigh, one inch apart. Soon the fizzing sound was heard, which continued until the needles were withdrawn, at the end of ten minutes. The tissue was softened around the negative and much hardened around the positive needle.

5. The needles were then introduced into the left thigh of the same cat, and retained for ten minutes. In consequence of the protracted use of chloroform, the heart had ceased to beat, and there were no signs of respiration. The positive needle was withdrawn and applied around the neck and over the lungs, with the effect of soon restoring the animal to consciousness. In the post-mortem examination, several days afterwards, the skin on the right thigh ulcerated for an inch in diameter. The muscles were separated down to the heel, but not to the bone. There was a cavity under the skin large enough to hold a walnut. The left thigh presented similar appearances, the cavity being as large as an egg, and the muscles separated down to the bone, as well as softened and eaten away. Part of the femur was denuded of periosteum, but not eroded.

In April last, Drs. Murray and Emory Eshelman performed the operation of electrolysis on Henry Williams, colored, æt. 28, in the wards of Dr. Harrison Allen. The man had an enlarged lymphatic gland, the size of a goose-egg, in the lower

maxillary region. The needles were attached to a Stöhrer battery of thirty cells half filled with the solution, and retained in the tumor for fifteen minutes. Suppuration followed without much pain, diminishing the tumor one-half. In three weeks the operation was repeated, the cells being full and the needles retained for ten minutes. This caused a thorough breaking up of the subcutaneous hardening and the continuous reduction of the mass. He suffered pain for but one day, and was not confined to bed at all. He was etherized on both occasions.

From these experiments we are inclined to look favorably upon electrolysis as a means of extirpating morbid growths. Whether it will prove as successful as the knife remains to be shown. That it is dangerous we do not believe; and if it fails the knife remains. It is followed by but little pain. As to the mode of its performance, we have but little to say. It is not, as has been so frequently stated, a cooking of the flesh, for the increase in temperature is slight, but is a complete breaking down of the tissue. That this is not caused by heat is further shown by the appearances of the tissue along the openings caused by the escaping gas, which do not resemble those usually produced by increase of temperature. In the experiments on dead tissue, the hardening around the positive pole led us to watch with interest the result of the hardening in the living cat. The greater part of it softened, suppurated, and was discharged. Part resumed its normal condition. This would seem to strengthen the supposition that the action of electrolysis is dependent upon the simple decomposition of water and perhaps of some of the salts of the blood, moisture around the negative needle being decomposed into its original elements,—the hydrogen escaping and forming the bubbles, the oxygen going to the positive pole and causing the oxidation of the needle noticed. Thus a circuit was established. On the decomposition of the moisture the hydrogen escaped, assisting to alter the tissue into the jelly-like mass noted. This left a dry hard tissue around the positive pole, which was in time partly able to resume its normal function, but part, being dead, was softened, sloughed, and was discharged. We propose in some future experiments to obtain a quantity of the escaping gas and to test it, and to investigate the effects of hydrogen gas on the tissues of the body.

ON A CASE OF DOUBLE ANEURISM OF THE FEMORAL ARTERY.

ONE ANEURISM CURED BY FIVE AND ONE-HALF HOURS' DIGITAL COMPRESSION.

BY J. FRAZER BOUGHTER, M.D., U.S.A.,
Fort Randall, Dakota Territory.

JAMES R., æt. 24 years, a soldier of the 22d Infantry, presented himself August 4, 1871, with the following history. He has always had good health, except during an attack of rheumatism about three years ago, which lasted three months.

While performing guard duty in bad weather, last winter, he had some pain in the right knee; since then, when he is exposed to bad weather, he feels some little pain in the right knee and the muscles of the right thigh.

About two weeks ago, his attention was first attracted to a swelling on the inner and anterior portion of the right thigh, by reason of the pain; this pain, paroxysmal in character, was felt shooting from the knee along the inner side of the thigh to the groin. Exercise increased it. He does not think the swelling has increased since first noticed up to this time (August 4, 1871).

He was lifting heavy logs (two weeks ago) at a saw-mill, when his right leg slipped from under him backwards, and at the same time he felt a "pain in the thigh."

Externally a swelling of considerable size is perceptible, the thigh appearing much larger than the left thigh at the corresponding point.

Examination reveals a pulsating tumor, of the size of a large hen's-egg, situated in the course of the femoral artery, at the junction of the upper and the middle third of the thigh, the tumor encroaching upon the lower portion of the upper third of the artery.

Circumference of the right thigh $7\frac{1}{2}$ inches below the anterior superior spinous process of the ilium, $19\frac{1}{2}$ inches; of the left thigh at the corresponding point, 18 inches.

Circumference of the right thigh 10 inches below the anterior superior spinous process of the ilium, $18\frac{3}{4}$ inches; of the left thigh at the corresponding point, $17\frac{1}{2}$ inches.

While making the examination, I observed a pulsating swelling, about the size of a small hen's-egg, situated in the groin over the course of the femoral artery. Its upper extremity was close to and extended slightly under Poupart's ligament, its lower reached within one and one-half inches of the upper extremity of the lower tumor, thus bringing the two within one and one-half inches of each other, while the femoral artery, apparently somewhat enlarged, was distinctly felt between them. The glands over this tumor were slightly, if at all, enlarged, and could be distinctly isolated by the finger. The aneurismal thrill was distinct in both tumors, but more so in the one situated in the groin. Firm pressure over the artery (and at the mouth of the sac), backwards and downwards against the pelvic brim, completely arrested the pulsation in both tumors. The patient said there had always been a little swelling in the groin since he was eight or nine years old, and that it had not increased in size since then. He never knew that it pulsated, and never had any inconvenience from it. His pulse was regular and full, beating fifty per minute.

August 4.—Treatment commenced at 1 P.M. Pressure upon the femoral artery was made with the thumb. Gave ext. aconit. fluid., gtt. iij. This pressure was constantly maintained till $6\frac{1}{2}$ P.M., when, the patient becoming restless, it was discontinued. At this time the lower tumor had diminished in size; pulsation was not so marked. No change in the upper tumor was observed. Gave liq. morph. sulph., $\frac{3}{4}$, at bedtime (9 P.M.).

August 5.—Patient slept well; no pain this morning; the lower tumor has diminished one-half; pulsation much less. He thinks the upper tumor is also smaller. Continued aconite gtt. iij. ter die. Diet—toast, milk, and tea.

6.30 P.M.—Upon visiting the hospital, I found the pulsation had entirely ceased in the lower tumor; its size was much diminished.

August 6.—Slept well. Pulse 60. The lower tumor is now felt as a hard lump. The pulsation is diminishing in the upper tumor. The swelling of the thigh is much less.

Circumference of the right thigh $7\frac{1}{2}$ inches below the anterior superior spinous process of the ilium, $19\frac{1}{4}$ inches; of the right thigh 10 inches below the same point, $18\frac{1}{2}$ inches.

Aconite continued as before.

August 8.—The lower tumor now being cured, pressure was again made at the mouth of the sac (of the upper tumor), at 1 P.M., in the hope that it might be cured if the patient could bear the pressure long enough; it was continued for six hours, when some reduction of size was observed.

August 9.—The right thigh is a little swollen. The patient complains of pain at the seat of yesterday's pressure.

Circumference of the right thigh $7\frac{1}{2}$ inches below the anterior superior spinous process of the ilium, $19\frac{1}{4}$ inches; of the right thigh 10 inches below the same point, $18\frac{1}{2}$ inches.

Pulse 56. Continued aconite. Diet increased in amount.

August 11.—Pulse 56. Circumference of the right thigh diminished to 19 inches at the upper point of measurement, and 18 inches at the lower point.

August 13.—Dose of aconite increased to eight drops three times a day.

August 18.—The patient was discharged from the hospital, feeling well, with the lower tumor entirely cured, and the size of the upper much diminished, it giving him no inconvenience.

It is somewhat remarkable that an aneurism so large should be cured by only five and one-half hours' press-

ure. As the circulation is still maintained through the upper tumor, the current of blood has made its way to the lower extremity by means of the profunda femoris and its anastomoses. The situation of the upper aneurism necessitating pressure at the very mouth of its sac, the force of the current of blood returning as soon as removed, is thought to be the only reason this one has not also yielded.

If it had been situated but a few inches lower, it is fair to presume, from the fact that the lower aneurism was so readily cured, that digital compression longer maintained at the groin would have caused its obliteration also.

The difficulty of curing inguinal aneurism even by compression over the external iliac is well known, nothing less than its ligation being generally successful.

As this patient suffers no inconvenience, he is allowed to go about, being still kept under observation.

CREASOTE IN CHOLERA.

BY G. B. LARTIGUE, M.D.,

Blackville, S.C.

THROUGH the columns of the *Medical Times* I beg to ask the attention of physicians to the use of creasote as a remedy in cholera.

I have used it continuously for nearly twenty years in all stages of dysentery and diarrhoea, with great satisfaction to myself and benefit to my patients; relying almost entirely on it for curative effects. I administer it to adults in doses of four drops every hour and a half or two hours, combined with about twenty grains of bicarbonate of soda or potassa, mixed in syrup or honey. More recently I have substituted for the carbonates about eight grains of chlorate of potassa in each dose, and in my practice have very rarely added an opiate or astringent to the mixture. I do not, however, consider the administration of opiates and astringents inappropriate in severe cases, nor do I advise the use of creasote in lieu of these medicines or other general treatment.

From my experience in the use of this medicine in these diseases, I am led to believe that it is not unlikely that in sufficiently large and often-repeated doses it will be of great service in the treatment of cholera, and perhaps that it might prove a valuable prophylactic, in doses of one or two drops to each glass of drinking-water.

I have frequently administered it in typhoid fever, with apparent advantage to my patients, and am satisfied that in the bowel-affections incident to the life of armies in the field it would make the count stronger on the roster "for duty."

The object of this communication is to ask a fair test of this remedy by physicians who have to treat cholera.

A SOUND LODGED IN THE UTERUS.—A woman (*American Practitioner*; from *Schmidt's Jahrbücher*) allowed a midwife to introduce a sound into her uterus for the purpose of procuring abortion. The sound disappeared in the genitals and could not be found. Abortion followed. About four months later the woman observed a small tumor near the umbilicus, which proved to be the sound. The os was dilated by means of a sponge tent, and in the anterior wall of the uterus was discovered the other end of the sound, which had perforated the uterus near the internal os, and had penetrated upward between the bladder and the uterus. Attempts to remove the sound by way of the vagina failed, and it was finally taken away through an incision made into the abdominal parietes. Recovery followed without further disturbance.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

CLINIC OF PROF. AGNEW, SEPTEMBER 6, 1871.

Reported by Dr. Elliott Richardson.

FISTULA IN ANO, WITH PHTHISIS.

THIS was a case of several years' duration, in a man fifty-two years of age. On an examination of the region of the fistula, a small external pile was seen, and extending from the anus a short distance towards the sacrum was a line of granulation tissue, in the sacral extremity of which the fistulous opening was situated. That this was a complete fistula was proved by the fact that fecal matter, when of a fluid consistence, passed through it; the papular appearance of the opening pointed to the same conclusion.

Associated with this trouble the patient had extensively-developed phthisis, a large portion of the right lung being involved. He was emaciated and anæmic, slept badly, and had a poor appetite. With regard to the propriety of an operation for the cure of the fistula in this case, Prof. Agnew said he should decline performing it, not for the reason that phthisis existed, for he considered this alone to be no contraindication.

He believed that the pressure upon the hemorrhoidal veins which have no valves, transmitted from the abdominal walls during the frequent coughing-paroxysms occurring in consumption, interfered with the proper circulation of the blood in that region, and that the resulting impaired nutrition favored the formation of abscesses in the ischio-rectal fossa, which may terminate in fistulæ. Further than this, he believed, there was no connection between the two affections. The reason for declining an operation in this case was the poor reparative power of the patient, which would render sloughing as a result of such procedure quite probable. The patient was ordered to inject the fistula two or three times a day with the following mixture: Liq. ferri subsulph., fʒss, aquæ, fʒij, and to take tr. nucis vom., gtt. v, inf. gent. comp., fʒss, three times a day.

HYDROCELE AND HERNIA.

The patient was a man, æt. 27, who, until he had reached the age of eighteen years, had an undescended testicle; at that time the gland came down into the scrotum. About one year ago, enlargement in the neighborhood of the external abdominal ring of the same side was first noticed; this had gradually increased up to the time of his presentation at clinic. Whatever may have been the nature of this tumor at first, that now presented was found, after careful examination, to be translucent, and was undoubtedly a hydrocele of the cord.

Although no hernia was apparent at this time, yet the patient stated that it frequently came down, and that on this account he had for some time worn a truss.

Prof. Agnew said hernia was a frequent sequel of the descent of the testicle in cases of this character, but, as the gland remained for a long time in the canal between the internal and the external abdominal rings, the former had time in most cases to contract firmly before the testicle was expelled into the scrotum. He directed in this case the use of a truss, for the purpose of preventing the descent of the hernia. The hydrocele was still small, but the patient was advised to return when it should have attained considerable size, in order to have the fluid drawn off, and tincture of iodine subsequently injected, with the view of effecting a permanent cure.

HYDROCELE.

This little child, fourteen months old, had a swelling of the right scrotum. This enlargement made its appearance after an exhausting illness, about three weeks before he was brought to the clinic. The testicle was situated at the bottom of the scrotal sac, and the tumor extended from it up into the external abdominal ring. It was tense, and no succussion corresponding with movements of the abdominal walls was perceived. It was rather firmer than hernia is usually found, and when examined by transmitted light was seen to be translucent.

Prof. Agnew said this was a case of hydrocele occurring in a child whose health had been enfeebled by disease. This is

a disease not uncommon in children, either as a congenital affection, or under conditions similar to those which have existed in this patient, and in either case generally disappears in the course of time without surgical interference. Recovery may be aided in obstinate cases, however, by the frequent use of a solution of muriate of ammonia. Should this fail, then it would be advisable to introduce a single thread through the sac, puncturing, and allowing the fluid to flow off; the inflammatory action induced will result in cure. This thread should not be allowed to remain over twenty-four or thirty-six hours.

It was directed that the following lotion be applied to the tumor two or three times a day: Ammon. muriat., ʒj, aquæ, fʒiv. Should no improvement be manifested under this treatment after the lapse of three or four weeks, then the introduction of a thread would be recommended.

DOUBLE VARUS.

A little girl, aged three years, was presented at clinic, who was the subject of a congenital deformity of this nature in a marked degree.

The toes were inverted to a position at right angles with the normal direction of the foot, and the soles drawn up so that the child when erect rested upon the outer borders of the feet. In consequence of this deformity, the skin in these localities was much thickened, and underlying it were bursal sacs forming bunions.

The proximate cause of varus is the contraction principally of the fibialis anticus and the muscles attached to the tendo-Achillis.

Prof. Agnew said the treatment indicated in the case was the subcutaneous division of the tendo-Achillis, and, possibly, of the tendon of the fibialis anticus, and the forcible eversion of the foot, which should be retained in a proper position by a metallic splint. This splint has a shoe attached, and admits of motion of two kinds at the ankle,—one antero-posterior, which is free, the other lateral, which is regulated by a screw, enabling the operator to abduct the foot to the extent desired. This splint should be worn until all tendency to deformity has been overcome.

Ether was then administered, and the skin punctured with a sharp-pointed tenotome opposite the border of the tendo-Achillis. A probe-pointed tenotome was then introduced and the tendon divided from behind forward. Previous to puncturing, the skin was drawn a little aside, so that the external wound should not correspond with the point at which the tendon was divided. The foot was then everted without tenotomy of the fibialis anticus.

After the section of the tendo-Achillis was accomplished, the small external opening was closed with a strip of adhesive plaster. The same operation was repeated upon the other foot. A piece of linen coated with ungt. zinc. ox. was then firmly bandaged upon the outer border of each foot, and the metallic splint above described was applied.

The lecturer said the splints should be left undisturbed for twenty-four hours, when they should be removed, and the limbs bathed with alum and whiskey. This should be repeated for two or three days, after which the treatment would be regulated by the ability of the skin to tolerate pressure. He said these cases required the most careful watching throughout, in order to prevent the recurrence of deformity or the production of excoriation, rendering removal of the splint necessary.

EPISCOPAL HOSPITAL.

RUPTURE OF THE MIDDLE MENINGEAL ARTERY,
CAUSED BY A FALL.

Reported by FRANCIS L. HAYNES, M.D., Resident Physician.

A. T., æt. 24, was admitted to the hospital, August 31, 1871, at 10.30 A.M. The following history was subsequently obtained from his friends, for the patient himself could not speak English. At seven o'clock of the morning of admission, while wheeling a heavily-laden barrow on the "roof of a shed two stories in height," the patient lost his balance and fell to the ground. For about thirty minutes afterwards he was without consciousness; he then revived and spoke to

his friends for a few minutes, but consciousness again left him during his transit to the hospital in a wagon.

On admission, the patient complained a great deal of pain in his left shoulder; the clavicle was found to be fractured at its sternal articulation, and the parts surrounding it contused and swollen. He was perfectly conscious, spelled his name when asked to do so, inquired eagerly concerning his condition, and, indeed, presented no symptom of injury of the brain. The clavicle, the acromial portion of which projected slightly upwards, was restored to its position by manipulation, and the man was placed on his back and left alone. On the return of the resident-surgeon a few minutes afterwards, the patient was vomiting profusely, his respiration was stertorous, and he was entirely unconscious. The left pupil was irregularly dilated. The pulse was slow and full. Three ounces of blood were abstracted from the median basilic vein, and an equal quantity from the back of the neck by means of wet cups.

12 M.—Spasmodic contractions of the muscles of the chest and extremities came on, during which the body was violently agitated. Each paroxysm lasted for about three minutes, and they were separated by intervals of five minutes. They continued until 5 P.M., when an enema of $\frac{f3ss$ turpentine was administered, after which they quickly ceased.

8 P.M.—The attendant noticed a rise in the patient's temperature.

11.30 P.M.—Temp., 107.5°. Skin dry; face flushed. Pulse 122, weak, compressible. Pupils both irregular; both moderately dilated. Respiration is very stertorous. The patient cannot be aroused by the application of any external irritant. Urine passes from him involuntarily. 12 P.M.—Temp., 109°. 12.30 P.M.—Temp., 109.5°.

September 1.—No change in the patient's condition occurred until his death at 2.10 A.M. At 1 A.M. his temperature was 110°; at 1.30 A.M., 110°; at 2 A.M., 111°. At 2.30 A.M., twenty minutes after death, the temperature of the body was 109°.

Autopsy, twelve hours after death.—The body was of large size and very well developed. Rigor mortis had set in.

The head and the left shoulder were the only portions of the body examined.

Head.—On removing the calvarium, considerable venous congestion of the dura mater was discovered. A large, dark, soft clot, weighing three and a half ounces, was found lying between the internal table of the skull and that portion of the dura mater which covers the lateral aspect of the middle and posterior cerebral lobes. On examining the dura mater minutely, a small opening was discovered in the coats of the posterior branch of the middle meningeal artery, three-fourths of an inch above its bifurcation. The opening was of sufficient size to permit the insertion through it into the calibre of the artery of a lead wire, such as is ordinarily used for sutures.

The surface of the brain under the clot was greatly and permanently flattened. The medulla oblongata was pressed to the right side. The vessels of the pia mater were distended with dark blood. The substance of the brain presented nothing abnormal. On removing the encephalon, several ounces of dark semi-coagulated blood escaped from the spinal canal.

Clavicle.—Upon exposing the left clavicle, a fracture was discovered separating the posterior portion of the sternal articulating surface from the shaft of the bone. The larger fragment was displaced in a slight degree, projecting inwardly and upwardly more than in the natural condition. Considerable effusion of blood into the neighboring tissues had occurred, forming a firm tumor, and giving to the hand applied over the region of the clavicle the sensation of greater displacement than really existed.

CHLORAL IN TOOTHACHE.—Dr. David Page recommends (*Brit. Med. Journal*, September 1) the introduction into the cavity of a carious tooth of a few grains of the solid chloral hydrate as a remedy in toothache. In a case which he briefly reports, he says, "the toothache was relieved in a few minutes; aching did not return all night, and, when it did in the morning, was again relieved by the same means."

POISONING BY PHOSPHORUS, AND ITS TREATMENT.—Dr. Vetter, of Dresden (*Virchow's Archiv*, August 15, 1871), in the course of a long article on this subject, says that there is no sufficient reason for attributing the poisonous effects of phosphorus to its conversion into phosphoric acid within the body, and shows that they are not at all similar to those produced by a concentrated acid, since there is no disintegration of the blood-corpuscles. Much larger quantities of phosphoric acid may be taken with impunity than can possibly be developed from the small quantity of phosphorus which often proves fatal. He believes, therefore, that phosphorus is poisonous in consequence of its volatilization within the stomach, by which it is enabled to penetrate through the coats of the stomach, and he refers to an experiment of Bamberger to show that it does pass readily through organic membranes. It seems to have the further power of converting the protoplasma, especially in the epithelia of the gastric follicles, in the heart, liver, and muscles, into fat.

In regard to the treatment of poisoning by phosphorus, Bamberger says that the volatilization of the phosphorus should be prevented if possible, and recommends that a solution of sulphate of copper should be administered to the patient, by means of which a phosphate of copper is formed. Sulphate of copper is, however, sometimes immediately vomited, before the reaction can have taken place; and in these cases it may be substituted by the acetate of copper, which, however, reacts more slowly with phosphorus, even when vinegar is added to it. Dr. V., however, has found oil of turpentine a much more reliable antidote. This has also the power of preventing the volatilization of phosphorus, as may be satisfactorily demonstrated by pouring a few drops of the former into a test-tube which contains a stick of the latter in a little water. Moreover, when phosphorus is dissolved in oil of turpentine, a spermaceti-like crystalline mass is formed, which may be given, dissolved in alcohol, to dogs or rabbits without producing poisoning or vomiting. All varieties of turpentine are not equally efficacious, the rectified spirit of turpentine being wholly without antidotal power. On the other hand, the oleum terebinthinæ gallicum, which contains a good deal of oxygen, possesses them in the highest degree. In the treatment of a case, the sulphate of copper in emetic doses should first be given every quarter of an hour. After emesis, ten grammes of oil of turpentine (gallicum) in mucilage should be given in four doses in the course of an hour. Milk and all other articles of food containing fat or oil should be avoided, as phosphorus is dissolved by them and its absorption thus promoted. Mucilaginous drinks, opium, or the application of leeches to the epigastrium will be found serviceable where the abdominal pains are severe.

FORMATION OF CALCULI UNDER THE PREPUCE.—Dr. W. H. Nelson (*Pacific Med. and Surg. Journal*, Sept., 1871) reports the case of a Chinaman who, as the result of an accident in early life, was the subject of phimosis. The opening through the prepuce, which was elongated to the extent of four inches, was so small that it would scarcely admit the end of a silver probe. When he urinated, the foreskin would distend like a bladder to the size of a man's fist, causing great suffering, and emptying itself very slowly.

The patient was placed under the influence of chloroform, and circumcision performed, when thirty-eight calculi, varying in size from that of a No. 6 shot to that of a buckshot, were removed.

THE USE OF CARBOLIZED CATGUT LIGATURES.—Dr. George Buchanan reports in *The Practitioner* for July, 1871, a case of diffuse traumatic aneurism upon which he had operated by laying open the sac and applying a ligature both above and below the wound in the artery. Carbolyzed catgut ligatures were used, because it was thought they would produce obliteration of the artery without ulcerating through its coats. Considerable discharge took place, but from first to last not a trace of decomposition or putrefaction could be observed. The most careful examination of the discharge failed to detect any appearance of the catgut ligatures, and they were probably retained and imbedded in the tissues, occlusion of the vessels taking place without ulceration of the coats of the artery and discharge of the ligature. The patient made an excellent recovery.

PHILADELPHIA MEDICAL TIMES.

A SEMI-MONTHLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

PUBLISHED ON THE 1ST AND 15TH OF EACH MONTH BY

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MONDAY, OCTOBER 2, 1871.

EDITORIAL.

THE PHILADELPHIA MEDICAL TIMES.

OUR subscribers will perceive that we have made a slight alteration in the title of our journal. It has been thought expedient to do this upon beginning a new volume, because the experience of the past year has demonstrated the necessity for a name which shall belong to it exclusively. It will, therefore, hereafter be issued as the PHILADELPHIA MEDICAL TIMES.

In adding to the original title of this journal the name of the city in which it is published, we disclaim any intention of making its policy subservient to Philadelphia interests, but, on the contrary, shall be unremitting in our endeavors to render it thoroughly national in spirit and representative not so much of a city as of a great country.

TO THE CLASSES OF 1871-72.

THE large number of students already attending the preliminary lectures and clinics in this city, promises fairly for the attendance upon the regular courses of our two great medical schools,—the University of Pennsylvania and the Jefferson Medical College. Never in the history of preliminary courses have we known so many in attendance upon them. That this is a result of the increased facilities which have recently been extended to students, we cannot for a moment doubt. Nor are we surprised that this extension did not make itself felt earlier. The history of the new movement was given in the issue of this journal for March 15,—the Spring Students' number. It began with the endowment of the Chairs of the Auxiliary Faculty of Medicine in the University of Pennsylvania by Dr. Geo. B. Wood, in 1865. It did not, however, attain its present stage until two years ago at the Jefferson College, and a little later at the University: indeed, it may be said that the experience of the past year or two has been necessary to place the new arrangements upon a thoroughly practical and at the same time systematic basis. With these facts remembered, we confess ourselves surprised to see the reaction set in so soon after a depression which we are bound to admit was in part owing to a disposition to rest upon the laurels of the past. We are not

of those who would lay the blame of the acknowledged unsatisfactory condition of medical education in this country altogether at the doors of American medical students. That they alone are not responsible is shown by the manner in which they have taken advantage of the increased facilities not only in Philadelphia, but in all the other large cities of the Union; and we will venture to say that in the main they will be ready to meet such future demands upon their time and qualifications as may be required by a constantly advancing standard of medical culture. That our method is still sadly deficient, as compared with those adopted abroad, cannot be denied; but we cannot force upon the mass of students a system of study which must extend over four or five years, and which shall be compulsory, when the conditions naturally existing in a new and rapidly-growing country, with its great demands on the physical energies of a people, and the unsettled state of its educational system, actually forbid such a course.

To those whose opportunities have given them the advantage of a collegiate education and a consequent higher general culture,—and there are many such,—we would suggest that a course analogous to that pursued abroad is by no means impossible in Philadelphia, and, we have no doubt, also in other cities. Indeed, it has long been the practice with young gentlemen in this city, whose opportunities permitted, to take a course precisely similar, except as to the date of their final examinations, to that which has recently been adopted at the Harvard Medical School, and which has met with such general approval. The plan has been to take three courses of lectures in their three years of study, devoting themselves during the first year to four branches, Anatomy, Physiology, Chemistry, and Materia Medica, and in the two succeeding years to the additional didactic courses, with Clinical Medicine and Surgery. Now, if to those pursuing such a course an examination were permitted at the end of the first year, we would have a plan practically identical with that which must be pursued at Harvard for some time longer with certain students. According to existing arrangements, the curriculum of a student pursuing a three-years course of study in Philadelphia differs from that of one at Harvard only in the fact that he must retain his information on the subjects studied the first year to the end of the term of study: the result of this is that, notwithstanding the review which he obtains by attendance upon the same lectures in succeeding years, either his memory is overtaxed, or the examinations must be less rigorous than they might be to the student's own advantage. We are confident that if the faculties of our schools were to permit such a voluntary three-years course of study with final examinations at the end of each year, there would be an annually increasing number who would take advantage of it, while those whose circumstances compel them to take the older plan would still be at liberty to pursue it: eventually the three-years course could be adopted for all, with sacrifice to none.

It is barely possible that these pages may be seen by

some among whom, by reason of unfamiliarity with the medical schools and institutions of Philadelphia, an impression prevails that its clinical facilities are inferior to those of other cities. Such an impression is radically erroneous. A glance at the announcements of the two schools and their roster of lectures will convince any one that the so-called college—or dispensary—clinics cover every department of special clinical medicine and surgery. These clinics are abundantly supplied with material of the most varied character, and are intimately associated with the didactic instruction, which is thus at once amply illustrated and rendered attractive by the resulting variety.

A mere glance at the list of general and special hospitals is sufficient to satisfy any one of the variety and extent of facilities in this respect, a most important feature of which is their *easy accessibility* from all points and from one another, as well as from the medical schools; while the long time during which they have been subservient to medical instruction, extending in the case of the Pennsylvania Hospital to more than a hundred years, has permitted the formation of cabinets and museums whose richness in the number and variety of pathological specimens is unequalled elsewhere in this country.

It is a difficult matter to advise medical students. It is perhaps not less difficult for them to follow advice which requires strict adherence to highly systematic methods. So many and varied are the engagements during the winter session of American schools, that it would be impossible for students to follow an unvarying course. It would, therefore, be folly to recommend it. There are, however, a few general matters concerning which suggestions may not be out of place. Much has been said and written with regard to note-taking, some recommending the taking of very full notes, others decrying the system altogether. From large experience in every degree of note-taking, from the merest memoranda to copious short-hand, almost verbatim notes, we believe that neither of the two plans proposed is correct. But there is here, as elsewhere, a golden mean, the attainment of which may be of great assistance. Such a moderate number of memoranda as do not, on the one hand, prevent one's following the words of the lecturer, or, on the other, by their meagreness fail to suggest in subsequent perusal the substance of a lecture, constitute this golden mean. Moreover, experience alone will enable the student to reach it. It may be safely said that, as a rule, the note-taking of the first month's lectures is quite worthless, except by way of giving experience. In this way, however, even *it* is useful. When a power of discriminate note-taking is attained, the most advantageous use of text-books becomes easy. It is clearly impossible to "read up" thoroughly the subjects discussed in lectures; and yet it is plain that, if lectures are to become at all available for instruction to ordinary minds, the latter require to be occasionally refreshed by other means. The note-book is the ready and direct means of accomplishing this, and, so far as it does it unaided, it is sufficient. But

the most experienced note-takers constantly find that they have dotted "points" the expansion of which they cannot possibly make. The appropriate text-book is now sought, and a few minutes' reading on the obscure subject clears it up and enables the learner to pass on to another. In this way he is spared the evident loss of time of reading in the books what he already knows, while he escapes also the much more serious consequence of attempting to read everything,—a failure to clear up all points which are really obscure.

A few words in conclusion on the subject of text-books may not be inappropriate in this connection. In *Anatomy*, no more suitable books than Leidy and Gray can be found: the former, concise and clear, is suitable for systematic reading by those who, pursuing a partial course, have time to follow the lectures in their text-books; the latter, with its admirable illustrations, is suitable for reference and the study of regional anatomy during dissection. In *Physiology*, either the seventh English edition by Baker of Kirke's Manual, or Dalton's Human Physiology, is suitable. The latter requires a revision of certain chapters, and the attention given to some subjects is more than sufficient, while in others it is inadequate to the wants of the student. And, although Kirke's Manual contains some errors, the subjects are fairly treated throughout, and for the most part are brought down to the present time. To those who understand German, the text-book of Hermann, of the University of Zürich, is by far the best. For reference, the excellent treatise of Flint, Jr., or the last (seventh) English edition of Carpenter, will be most useful. We warn students against the American reprints of Carpenter and Kirke, as being from old and now almost valueless English editions. In *Chemistry*, the new and excellent work of Atfield, reprinted by Lea of Philadelphia, is by far the most suitable. In *Materia Medica and Therapeutics*, Wood or Stillé, with Carson's "Synopsis" at the University, and Biddle's "Review" at the Jefferson College, is available. A good text-book upon this subject in a single volume of about five hundred pages is much needed. In *Practical Medicine*, Flint's or Tanner's "Practice," with Da Costa's "Diagnosis," will answer the wants of students better than the larger works of Aitken and Reynolds. For *Surgery*, the unequalled work of Prof. Gross, notwithstanding its size, recommends itself unqualifiedly. To those who wish a smaller work, that of Erichsen is highly recommended. In *Obstetrics and the Diseases of Women and Children*, Cazeaux's Midwifery, Thomas's or Graily Hewitt's Diseases of Women, and Meigs and Pepper on Diseases of Children, will be found most useful.

Abroad, or at least in Germany and Austria, it is the practice with students to subscribe to a medical journal, and the *Wiener Medizinische Presse* or the *Berliner Wochenschrift* is as commonly seen in their hands as is a daily newspaper in the hands of our own students. By such a course they are kept familiar with current medical news and improvements in medical science and appliances from the outset of their career, and on

account of the interests and sympathies thus excited they early become an integral part of the profession they hope subsequently to adorn. The advantage to us of a similar custom, not only in the above respects, but also in correcting an acknowledged deficiency of interest on the part of our profession in medical literature, is apparent.

The General Introductory Lectures are delivered at both schools on October the 9th,—at the University at 12 M. by Prof. F. G. Smith, and at the Jefferson College at 8 P.M. by Prof. B. Howard Rand.

The Dental Colleges and the College of Pharmacy are important parts of the Medical Institutions of Philadelphia. We wish we had space to address some of our remarks more directly to the numerous body of gentlemen constituting their classes; but much that we have already written is equally applicable to them. Preliminary courses are delivered at the Dental Schools during October, and the courses begin at each on the 1st day of November. At the Pennsylvania College of Dental Surgery the general introductory to the course is delivered by Prof. Mears at 5 P.M., and at the Philadelphia Dental College by Prof. Howell at 8 P.M. At the College of Pharmacy the general introductory will be delivered by Prof. Parrish on Monday evening, October 2, at 7½ o'clock.

THE PATHOLOGICAL SOCIETY.

WE shall in our next number resume the publication of the Proceedings of the Pathological Society, which was discontinued in consequence of the adjournment of the Society in June. The first meeting after the summer recess was held on Thursday evening, September 14. The attendance of members was large, and several interesting specimens of morbid anatomy were shown.

The large increase of membership, together with the number of interesting specimens exhibited and reports presented during the past year, furnishes very gratifying evidence of the interest manifested by the physicians of Philadelphia in pathological research. We are glad to be able to announce that the third volume of the Society's Transactions is at present in the hands of the printer and will be ready in a short time for distribution.

LEADING ARTICLES.

MEDICAL EDUCATION ABROAD.

I.

A FEW days only now separate us from the beginning of another *Annus Medicus*. In every medical school in the land the corps of teachers is reassembling and perfecting its arrangements for the ensuing course, and from all quarters students are crowding to the chief centres of medical instruction. It is with no small satisfaction that we look upon the evident improvement in the system of teaching at the principal

schools in America, and we can sincerely congratulate the students of to-day upon the superior advantages and facilities afforded them in the prosecution of their studies.

The history of medical education in America during the past few years has been chiefly marked by the introduction or more marked development of two important elements. We allude, of course, to the more intimate connection between didactic and clinical teaching, and to the large number of courses upon important specialties which have been established. It is evident that both of these improvements have been introduced in great measure in imitation of the system of instruction pursued in medical schools abroad; and, indeed, it is chiefly owing to the more complete development of these advantages that medical education there presents certain features of peculiar excellence. In thus speaking, reference is made principally to the great schools of Germany, Austria, and France. The Universities of Edinburgh and Dublin have, indeed, long deservedly held an illustrious position, and their faculties now, as they have always done, include some of the proudest names in the ranks of British medical science. It is, however, no disparagement of these schools to say that, partly owing to the comparatively small size of the cities, partly to a want of close union and centralization of the various courses of instruction, the facilities offered by them to the student do not compare favorably with those presented at Vienna, Berlin, and Paris. It must undoubtedly strike any casual observer as curious that the imperial city of the world, London, has never been able to boast of a great medical school. The high prizes of wealth, title, and social influence there offered have always attracted to London many of the most brilliant and able medical men in Great Britain, but the mistaken policy they have pursued in medical teaching has always effectually prevented the establishment of a great and truly national medical school. In one single respect, and one only, this system of numerous schools, each connected with a hospital, is of advantage. The number of students at each school being necessarily limited, it is possible to follow more satisfactorily the practice and teaching of any one distinguished man. But, while it allows this, it entails many disadvantages. The number of truly great and successful teachers at one time in any city is never large; and, as the successful applicants for hospital appointments do not obtain their positions by the influence of their ability as teachers, it can scarcely ever happen that any hospital staff should contain more than a small proportion of eminent teachers. And yet the various hospitals in London are separated by such great distances that it is necessary for a student to restrict himself to following the lectures given at some one of them. A further and equally great disadvantage is that, as hospital appointments are chiefly valued on account of the introduction they afford to consulting practice, it is natural that the practical branches of teaching should attract the attention of the most able and experienced members of the staff, while those branches (such as morbid anatomy, chemistry, physi-

ology, etc.) which have little or no tendency to make the teacher known to the public as a practical physician or surgeon are left to the junior members.

When, in addition to this, we take into account the expense involved in maintaining so many small schools, the multiplication of small museums and collections of apparatus, and the impossibility of utilizing to the best advantage the vast amount of clinical material in London, we cannot wonder at the cry which is now being raised there for the establishment of a great central university, where the didactic branches of medical science could be studied under the most eminent teachers, while the hospitals would be reserved solely for the purpose of clinical instruction. It appears inevitable that, until some such modification of the present system is adopted, no great medical school can exist in London.

We turn, then, to the medical schools of Vienna, Berlin, and Paris, as the three which present the highest degree of organization and development, and which afford the most varied facilities to the student. The fundamental advantage which they all possess, and to which they owe their illustrious position, is a strong and continuous governmental support and protection, which not only renders the salary of the teachers secure, but enables them to maintain the standard of education by prohibiting the issue of diplomas by any other body of men. It is impossible to obtain the same results by any other system. A school in America, so richly endowed as to be able to secure the services of the best teachers and to be indifferent to the size of its classes, could undoubtedly maintain as high a standard of education, but the entire want of wise governmental protection would seriously impair its usefulness.

It is interesting to observe how nearly alike are the main features of the three schools above mentioned. In all of them the basis of the system is a school for didactic teaching in intimate association with a hospital for clinical teaching, with the accessories of physiological and pathological laboratories.

In addition, therefore, to the official course, embracing the subjects required in the examination for a degree, the student is enabled to devote himself to the study of experimental physiology, microscopy, pathology, or any special branch of medicine or surgery. The number of years required for the completion of the official course is considerable,—four to six,—and there is consequently ample opportunity for the study of some of these accessory branches. It is precisely here that the great advantage of these schools lies. Provided with every material resource, the laboratories for special research are under the direction of men of the highest ability as original investigators and teachers, who are induced to accept these positions, partly by the salary attached to them (though this is always small), partly by the chance of realizing a handsome income from their numerous pupils, and partly by the opportunity of pursuing special studies and researches and thus acquiring reputation and advancing their favorite branch of medical science; and the pupils studying with them have an opportunity of profiting by the skill

of the master, as well as of receiving his aid in the direction of their own investigations. So also the numerous special courses of practical instruction are given in connection either with a hospital or dispensary service by men who have devoted themselves to this particular branch; and, as their classes are usually small, the students have ample opportunities for acquiring thorough practical knowledge of the subject. When we consider in connection with this the fact that the professors lecturing in the official courses are the most eminent teachers in the country, chosen either by a form of competitive examination or by impartial selection, it is evident that the system of medicine as found in these three great cities is truly excellent.

It may seem strange to find the school of Paris classed with those of Berlin and Vienna so soon after the disastrous events of the past year had given such a terrible blow to all French institutions. But whoever has fancied that a series of reverses even so crushing as these have been, or a disorganization of the government even so complete as has resulted in France, could long check the indomitable energy and inexhaustible vitality of its great people, has been strangely mistaken. Within a few weeks after the suppression of the Commune, the École de Médecine opened its doors for a summer course of lectures in place of the course usually given during the spring months. The professors returned to their posts, a considerable class of students collected, and, while yet the sounds of war had scarcely subsided and the signs of havoc and destruction lay thick around the old Quartier Latin, the Medical School of Paris was reorganized and recommenced its beneficent work. It is true, indeed, that many of the brightest names among the Faculty of the French School have recently passed away, and that, for the past decade especially, the lead in medical thought has been assumed by the German School; but it requires only moderate faith to believe that the day is not far distant when the successors of Laennec, Louis, Lisfranc, and a score of others no less illustrious, will, under a more liberal and stable government, reassert their equality in the great field of science.

These three great schools, similar as they are in many of their general features, present many points of difference which render each of them superior to the other two in certain respects.

The first and most decided advantage possessed by Vienna lies in the far greater degree of centralization of all medical teaching there. The splendid Pathological and Physiological Institute—where Rokitsansky and Stricker work—is in immediate connection with the great General Hospital, where all of the courses on practical and clinical subjects are delivered. In Berlin and Paris, on the other hand, the hospitals and schools are some distance apart; and no one can fully appreciate the disadvantage of this separation who has not trudged from the Royal University to hear a lecture from Frerichs or Virchow at La Charité in Berlin, or from the École de Médecine to the Hôtel-Dieu in Paris.

It were invidious to continue the comparison between

these three great schools with reference to particulars and to individual teachers. It is easy to observe, for instance, that it will be highly difficult for Vienna, since the death of Oppolzer and the withdrawal of Skoda, and for Paris, since the death of Trousseau, to maintain their reputation in regard to clinical medicine while students at Berlin have the opportunity of hearing both Frerichs and Traube. So, on the other hand, no one will challenge the claim of Hyrtl (at Vienna) to be, *facile princeps*, the greatest teacher of anatomy in Europe; and it is impossible to find elsewhere such opportunities for the study of obstetrics as are offered in the lying-in wards of the huge General Hospital of that city. So, again, it may be confidently asserted that the world-renowned Hôpital des Enfants at Paris, whence have issued such priceless contributions to our knowledge of the diseases of children, still affords the widest and best field for the study of this important class of affections.

These are, however, only superficial and narrow criticisms, for our design at present has been merely to sketch the salient features of the system of medical education as it now exists in the three great capitals of continental Europe, without attempting to decide the difficult question as to which of these cities offers absolutely the best advantages to students of medicine. There are, however, several points in connection with this subject, of much importance to our students in America, and we propose to advert briefly to these in a second article upon this topic.

REVIEWS AND BOOK NOTICES.

A TREATISE ON DISEASES OF THE NERVOUS SYSTEM. By WILLIAM A. HAMMOND, M.D., Professor of Diseases of the Mind and Nervous System and of Clinical Medicine in the Bellevue Hospital Medical College, Physician-in-Chief to the New York State Hospital for Diseases of the Nervous System, etc. With Forty-five Illustrations. 8vo, pp. 754. New York, D. Appleton & Co., 1871.

This volume of Dr. Hammond's supplies a want that has been long felt, and the well-known reputation of the author in the treatment of nervous diseases, as well as the vast experience he has had in this class of cases, especially during the past five or six years, during which he has been residing in New York, makes the work all the more valuable. This is the first work exclusively devoted to diseases of the nervous system which has ever been published in this country; and, in fact, there has been scarcely any treatise in the English language on this subject which covers the same ground.

The author states in the preface that the work has no pretensions to being exhaustive, but that it is mainly practical, and at the same time "sufficiently complete for the instruction and guidance of those who might be disposed to seek information from its pages." It is therefore eminently suited to the mass of practitioners.

The style in which the book is written is elegant and agreeable, and would be more appropriate in a series of semi-popular articles than in a systematic scientific treatise.

It is claimed by the author that to a great extent the work is based upon his own experience and observation. This is certainly a recommendation; but it strikes us that throughout the volume there is rather too great an inclination to bring forward as original discoveries observations made even in trivial matters.

The treatise is arranged in five divisions,—viz.: diseases of

the brain, diseases of the spinal cord, cerebro-spinal diseases, diseases of nerve-cells, and diseases of peripheral nerves.

In the introductory chapter there is given a description of the various apparatus and appliances used in the diagnosis and treatment of nervous diseases. Prominent among these we observe the ophthalmoscope, of which frequent mention is made in this volume in regard to the diagnosis of many cerebral affections. This instrument has been one of the most valuable adjuncts in the study of diseases of the brain which have come into use in the past few years. In reference to Kidder's arrangement of Smee's cells for obtaining the constant current which is recommended, we must say, that, as the result of our own experience, although at first the current may be energetic and continuous, still the cells are placed together in so disadvantageous a manner, and the connections between the elements are so imperfect, that in a short time the current becomes weak and uncertain; moreover, it requires much time and trouble to keep the battery in order. Stöhrer's battery, which can be obtained at but little greater expense, is a much more perfect arrangement, and needs but slight attention.

The first division, which embraces cerebral diseases, is admirable, especially the chapters on Embolism, which is included under the head of partial cerebral anæmia, aphasia, and cerebral softening. In fact, all of the subjects in this section are treated with great skill and care. The article on Insanity is of considerable length, and will be of the utmost assistance to the general practitioner, who, as a rule, knows absolutely nothing of the affection, and is nevertheless frequently called upon to make a diagnosis in cases of this nature.

Our author considers multiple cerebral sclerosis capable of existing as an independent disease, and in this view he differs from many other writers on the subject; but the case related by him in which a thorough post-mortem examination was made seems to prove the possibility of the disorder occurring without any spinal sclerosis.

The chapters on antero-lateral spinal sclerosis and posterior spinal sclerosis are complete and of great interest. In the treatment of these affections the use of the constant current and nitrate of silver as well as ergot in the early stages is advised. With these remedies there seems to have been greater success than the majority of physicians meet with in the treatment of these usually obstinate disorders.

Under the head of cerebro-spinal diseases there is introduced an affection which has not previously been noticed, and in illustration of which two cases are given. The malady is entitled "Athetosis," and is characterized by irregular movements of the fingers, which finally become so excessive as to render the hand useless. This recalls a case under our care some time ago, in which there was a somewhat similar condition. The patient was paraplegic, and the fingers underwent spasmodic movements, particularly when the hand was used.

In the section on diseases of nerve-cells we have progressive muscular atrophy, or "atrophy and disappearance of trophic nerve-cells;" and in this connection the writer states his conviction of the existence of trophic nerves, agreeing with Duchenne and Joffrey. Glosso-labio-laryngeal paralysis, organic infantile paralysis, paralysis agitans, writer's spasm, and lead palsy are also included under this head.

Infantile paralysis is scarcely entitled to a place in this section; for, although it is true that but little is known of its pathology, it is highly probable that in the early stages there is spinal congestion, and, later, sclerosis of the antero-lateral columns of the spinal cord.

We regret that the section on diseases of peripheral nerves is not more complete and thorough. For instance, neuralgia, which is a disease of frequent occurrence and of the greatest importance, receives but a few pages, and the treatment of it is given but a superficial consideration. Neuritis and sclerosis of peripheral nerves are not mentioned at all.

The author makes exceedingly positive diagnoses in many maladies which most medical men commonly find it difficult to recognize with certainty. Thus, of cerebral congestion, which may readily be confounded with epilepsy, cerebral anæmia, or an organic disease of the brain, he states that he has seen six hundred and twenty-two cases in private practice.

In the treatment of nervous diseases, Dr. Hammond brings into notice many remedies which are not in general use in

this country, and in the employment of which he reports many favorable results. Among these are the constant current, which he has found useful in the sclerotic conditions of the brain and spinal cord, as well as in most of the forms of paralysis in which it has been used for several years. Ergot he has found of decided benefit in spinal congestion. In the treatment of chorea, he states that he has had unflinching success with strychnia, although he does not use it in the large doses recommended by Trousseau. The ether-spray along the spine he has also used in several cases, in connection with strychnia internally, and a cure has resulted in every case "in two weeks." In the hands of others this remedy has not been so successful. The bromide of lithium, which was first introduced by Dr. S. Weir Mitchell, the author advises in preference to the bromide of potassium in those cases in which it is desirable to obtain a speedy effect. Phosphorus is regarded as being of advantage in many cerebral disorders, and the phosphide of zinc, which Dr. Hammond claims he was the first to use in this country, he considers an elegant preparation.

Notwithstanding the faults which as critic we have been compelled to point out in this work, it is, on the whole, excellent, and does honor to American science. It is not a mere compilation of the writings of others, but it contains much original matter, and shows thorough research.

The book is handsomely gotten up; the print is unusually good, and illustrations are introduced whenever they are necessary for the exemplification of a subject.

THE PHYSICIAN'S PRESCRIPTION-BOOK: Containing Lists of the Terms, Phrases, Contractions, and Abbreviations used in Prescriptions, with Explanatory Notes; the Grammatical Construction of Prescriptions; Rules for the Pronunciation of Pharmaceutical Terms; a Prosodiacal Vocabulary of the Names of Drugs, etc.; and a Series of Abbreviated Prescriptions illustrating the Use of the Preceding Terms: to which is added a Key containing the Prescriptions in an Unabbreviated Form, with a Literal Translation, for the Use of Medical and Pharmaceutical Students. By JOHN PAREIRA, M.D., F.R.S. Fifteenth Edition, 18mo, pp. xvi., 286. Philadelphia, Lindsay & Blakiston, 1871.

A very long notice of this little book is hardly necessary, since the fourteen editions through which it has already passed must have made it very familiar to the medical profession, and since the title-page gives us so thorough an insight into the nature of its contents. In the preparation of the edition which he now presents to the public, Dr. Pareira has subjected the whole of the matter to a careful revision, and has made such alterations and additions as seemed to him to be required for the continual fulfilment of its original object, "which is not merely to represent the prevailing mode of prescribing medicine, according to the instructions of the Pharmacopœia, which continue in authority, but to explain and illustrate the use of terms which are commonly used or may be occasionally met in extemporaneous prescriptions, and a knowledge of which is required alike by medical and pharmaceutical students." This object seems to have been attained, and it gives us pleasure to recommend the work to those members of our profession who do not already possess it. There are few physicians who will not derive occasional benefit from consulting it, but it will, we think, be found to be especially useful to those who have not had the advantage of a classical education.

BOOKS AND PAMPHLETS RECEIVED.

The Functions and Disorders of the Reproductive Organs in Childhood, Youth, Adult Age, and Advanced Life, considered in their Physiological, Social, and Moral Relations. By William Acton, M.R.C.S., etc. Third American from the Fifth London Edition. 8vo, pp. xii., 348. Philadelphia, Lindsay & Blakiston, 1871.

A Practical Treatise on Fractures and Dislocations. By Frank Hastings Hamilton, A.M., M.D., LL.D., Professor of the Practice of Surgery with Operations, in Bellevue Hospital Medical College, etc. Fourth Edition, Revised and Improved. Illustrated with three hundred and twenty-

two wood-cuts. 8vo, pp. xxiv., 789. Philadelphia, Henry C. Lea, 1871.

Practical Therapeutics, considered chiefly with Reference to Articles of the Materia Medica. By Edward John Waring, M.D., F.L.S., Member of the Royal College of Physicians, London. Second American from the Third London Edition. 8vo, pp. viii., 765. Philadelphia, Lindsay & Blakiston, 1871.

Medical Office Pupilage. By Dr. John D. Jackson, of Danville, Ky. Pamphlet, pp. 13.

Cancer: Its Classification and Remedies. By J. W. Bright, M.D. 8vo, pp. 188. Philadelphia, S. W. Butler, M.D., 1871.

Announcement of the Annual Course of Instruction in the Philadelphia College of Pharmacy, 1871-1872.

The Physical Diagnosis of Brain-Disease. By Reuben A. Vance, M.D. Pamphlet, pp. 8. New York, William Baldwin & Co.

GLEANINGS FROM OUR EXCHANGES.

SPINA BIFIDA CURED BY AN OPERATION.—Dr. C. v. Brunn reports (*Berlin. Klin. Wochenschrift*, No. 17) a case of spina bifida upon which Prof. Weber, of Halle, operated with success. The child was a rachitic girl 1½ years old, who at the time of her birth presented no unusual appearances, except a rather large head, and a firm but painless tumor, about the size of a hazel-nut, on the back. The tumor soon after increased in size, and fluid was detected in it. When six months old, the child began to grow thin, and it was found not to have undergone the usual development, while, on the other hand, the tumor on the back had increased to the size of a duck's egg. The skin over it was very tense, thin, and in the lower two-thirds purplish in color, so that there was reason to believe that a spontaneous opening would soon occur. The tumor was situated over the first, second, and third dorsal vertebræ, and was attached to the spinal column by a pedicle, having about the thickness of two fingers. It was filled with liquid, and was indolent. At the arch of the second vertebra a diastasis of the laminae on both sides could be detected, but only at this point. A communication between the interior of the tumor and the sac of the spinal membranes existed only to a very slight extent. The tumor, however, became smaller and relaxed after prolonged and gentle compression. Professor Weber determined to remove the tumor by means of Hutchinson's ovariectomy clamp. Gradual compression of the pedicle was made with this, the contents of the sac being also removed by degrees. On the seventh day the tumor and the clamp fell off together, leaving behind it a healthy granulating surface about three-quarters of an inch in diameter. The canal of communication not being thoroughly closed, the actual cautery was applied to it; but it was some weeks before complete union had taken place. In the mean time there was great improvement in the child's health.

MR. T. SPENCER WELLS' REPORT ON OVARIOTOMY.—The *British Medical Journal*, July 8, 1871, contains the report of proceedings of the Royal Medical and Chirurgical Society, held June 13, 1871, at which Mr. T. Spencer Wells submitted his fourth series of one hundred cases of ovariectomy, in tables of three series.

Series 1.—Cases in which ovariectomy was completed: 100 cases; 78 recoveries, 22 deaths.

Series 2.—Cases in which ovariectomy was commenced, but not completed: 6 cases; 2 relieved or cured, 4 died.

Series 3.—Cases where an exploratory incision was made: 7 cases; 5 recovered from incision, 2 died.

He showed that the mortality after ovariectomy was steadily diminishing: of his first 100 cases, 34 died; of his second 100 cases, 28 died; of his third 100 cases, 23 died; of his fourth 100 cases, 22 died. In this fourth series, 44 had been in hospital and 56 in private practice. In private practice the mortality was only 14 per cent., while in hospital it was 31 per cent. The author believed that the mortality in pri-

vate practice might be taken as a guide to what might become the general average mortality after ovariectomy, and he was convinced that it might be reduced to about ten per cent. without excluding those extreme cases where the operation is performed as a forlorn hope. The author then proved that large tumors of the non-gravid uterus had been frequently mistaken for ovarian tumors, and he pointed out how they might be distinguished from each other. He showed that there is nothing in the history of a doubtful case which affords any decisive assistance, and then examined in detail the signs afforded by inspection and measurement of the abdomen, by palpation, and by percussion and auscultation, which are of value in diagnosis. He then described the conditions to be observed in examination by the vagina and rectum,—alone or combined, and in conjunction with examination by the abdominal wall,—deferring to a future opportunity any account of the results obtained by exploratory punctual incision.

REFLEX EPILEPSY FROM DISEASE OF THE EAR.—Dr. Schwartze communicates to the *Centralblatt*, May 20, 1871, the case of a young man in whom epilepsy seemed to be caused by disease of the middle ear. The countenance was expressive of suffering, there was slight paralysis of the left facial nerve, and the skin covering the mastoid process of the left side was red and swollen, and, when pressure was made upon it, it was found to be very sensitive. Dr. S. thought it right under these circumstances to perforate the mastoid process, in the hope that with the evacuation of the thickened pus that was retained in the middle ear the epileptic paroxysms would cease. After the operation there were no more severe seizures, and the patient's general health was very much improved, there having been no attack, at the time of reporting the case, for several months.

SUPPURATION OF HALF OF ONE OF THE HEMISPHERES OF THE BRAIN—NO LOSS OF CONSCIOUSNESS AND NO PARALYSIS—SUDDEN DEATH.—We find the following remarkable case reported by Dr. A. Schwarzenthal in the *Wiener Medizinische Presse* for August 20: A woman, æt. 30, a day-laborer, who had previously been under treatment for syphilis and leucorrhœa, was admitted last May to the hospital in Zolkiew, suffering with headache, which was at that time of several weeks' duration, with prostration and with diminution of appetite. Febrile exacerbations occurred sometimes in the morning and sometimes in the afternoon, and it was consequently thought that she had intermittent fever. In time her condition had so much improved that she was discharged. She returned to her occupation, doing as hard work as before her illness, and occasionally frequenting houses of ill repute, at one of which she died suddenly a month after her discharge from the hospital. As there was a suspicion that violence had been used towards her, an inquest was held, the result of which was to show that there was no reason to believe that she had been ill used. The posterior half of the right hemisphere of the brain was found converted into a large abscess, while the left hemisphere was doughy to the feel, and the cerebellum was softened. From the history of the patient, Dr. S. thought that the abscess of the brain must have existed for three months, notwithstanding that during all that time there had been no loss of consciousness, and that during part of it she had been able to do hard work.

A PREGNANT WOMAN WOUNDED IN THE ABDOMEN—RECOVERY.—The following is an abstract of the report of a very interesting case which will be found in the *Wiener Medizinische Presse* for August 20:

A woman eight months gone with child was accidentally shot on the 14th of November, 1870. The gun was loaded only with a wadding of flax, which was rammed down very tightly upon the charge, and made a wound, about half an inch in diameter, an inch below the last rib of the left side, and five inches from the vertebrae. The edges of the wound were lacerated and the skin in its neighborhood discolored and swollen. An examination showed that the intestine was protruding through the wound, but it was very readily restored to its proper position. On the night of the 15th of November she bore a living child, which died, however, in a very short time. A few days after, the wadding was removed from the

wound, and it was then discovered that the intestine had been injured. The woman left her bed on the fourteenth day after the occurrence of the accident. On the 25th of January, 1871, Dr. Reiss, who reports the case, heard that she was doing well, the wound in the side having diminished to the size of a pea, and most of the fæces being passed by the anus. In March, 1871, Dr. R. saw her, and found the wound in her side completely closed. The evacuations were passed by the anus without pain, and she presented as healthy an appearance as before the accident.

SIR THOMAS WATSON ON THE PATHOLOGY AND TREATMENT OF CHOLERA.—In a recent reprint in the *Brit. Med. Jour.*, August 5, 1871, from advance sheets of the new edition of Sir Thomas Watson's Lectures, now passing through the press, this eminent authority accepts the theory of Dr. George Johnson, that the phenomena of cholera result from the entrance of a peculiar poison into the blood, where it probably undergoes, like that of smallpox, a rapid process of self-multiplication, and spoils certain of the blood-constituents which are ejected through the mucous membrane of the alimentary canal; that the feelings of general oppression and *malaise* sometimes experienced before the onset of the bowel-symptoms are indicative of blood-poisoning; that the copious discharges are expressive of the efforts of nature to throw off a noxious material, and really form, therefore, a necessary part of the process of recovery; and that, if the pouring forth of the vascular excretion be checked (as it can perhaps by opium), the risk of fatal collapse is thereby increased.

The treatment recommended, therefore, is the "evacuant plan," consisting in the use of castor-oil, rhubarb, magnesia, and a similar class of remedies, which carry off the offending matter.

TREATMENT OF PRURITUS VULVÆ DUE TO VAGINITIS.—Dr. Lorrie Athill, in a clinical lecture (*Dublin Med. Press*, June 21, 1871), primarily states that pruritus rarely occurs except as a symptom of inflammation of the mucous membrane of the uterus or vagina, and can only be relieved by curing these affections. If vaginitis alone exist, with a view of attaining this object and checking the pruritus which it causes, use in the first instance soothing applications, then astringent ones. Of the former, none can compare with infusion of tobacco. It should be made by infusing two drachms of the unmanufactured leaf in a pint of boiling water. He has never seen the least unpleasant effect follow its use, while the relief afforded is most marked.

Another mode of treatment of the greatest value, according to this gentleman, is glycerine. A roll of cotton-wool, with a strong thread attached to facilitate removal, and saturated with glycerine, should be passed into the vagina through a speculum, and allowed to remain there for twenty-four hours; this produces a copious watery discharge, which is often followed by very satisfactory results.

Syringing the vagina with a solution of borax in tepid water or infusion of tobacco is in such cases of great use. It should be used in the strength of three drachms to the pint, and injected by means of one of the continuous siphon syringes. To allay the intolerable itching, Dr. Athill has also been in the habit of recommending the patient, after she has sponged herself with warm water, to lay inside the labia a piece of lint soaked in a lotion composed of carbolic acid, ten grains, acetate of morphia, eight grains, dilute hydrocyanic acid, two drachms, glycerine, four drachms, and water, two to four ounces.

CHAPMAN'S ENTIRE WHEAT FLOUR.—Prof. A. H. Church, M.A., of the Royal Agricultural College, Chichester, remarks (*Chem. News*, Sept. 1, 1871) that it is well known that fine flour contains less nitrogen than the whole wheat-grain, and that in endeavoring to supplement this deficiency of nitrogenous compounds by the addition of bran, while the chemical conditions of a satisfactory food rich in flesh-formers may be fulfilled, the mechanical texture of the mixture leaves much to be desired. Chapman's entire wheat flour gave in his hands very encouraging results. Two determinations of nitrogen gave, respectively,

2.12 p. c. of nitrogen.
2.11 " " "

The mean of these results, when multiplied by the proper factor 6.33, gives 13.39 p. c. of albuminoids as contained in

this preparation. This is a very large amount, and one seldom reached except in grain of exceptional qualities. The ash determination was also favorable. The whole grain of wheat yields generally about 1.6 p. c. of ash. Chapman's flour gave 1.04,—which compares favorably with the low percentage of 0.6 found in ordinary fine flour. This ash was unusually rich in the most important ingredient of the mineral matter of wheat-grain, containing as it did 51.8 p. c. of anhydrous phosphoric acid. The ash of ordinary whole wheat gives as an average no more than 46.2 p. c. of this ingredient.

THE MAGNETIC CONDITION OF MINERAL WELLS.—To the *Detroit Review of Medicine and Pharmacy*, July, 1871, Prof. R. C. Kedzie has contributed an admirable paper on the magnetic condition of mineral wells.

In direct opposition to the opinion generally and justly held by scientific men, it has been frequently announced that in various parts of the country water-sources existed, the water from which had the power of inducing a magnetic condition in pieces of iron held in it for a short time. The source of error is to be found in the fact that whenever bars or tubes of iron are sunk vertically in the ground they become magnetic,—consequently, of course, capable of inducing a similar condition in other suitable bodies,—and that the test for the magnetic qualities of the water has nearly always been made in the immediate neighborhood of the tubing supplying the water.

In those cases where magnetic properties have been induced in metal immersed in the stream running at a distance from the magnetic tube, the explanation is that any substance capable of being magnetized will become magnetic if held perpendicularly for a sufficient length of time.

The more nearly is the iron rod in the line of magnetic dip at the point of observation, the more rapid and powerful will be the magnetic induction; and, as the dip becomes more and more nearly vertical as we move northward, it is natural that this magnetic condition should have been most noticed in the more northern States.

Professor Kedzie takes pains to prove his statements, and answers unhesitatingly in the negative the questions "Do magnetic properties exist in these waters?" and "Do any healing powers which they may possess arise from this magnetic condition?"

He is, of course, perfectly right.

[We may be permitted to observe that the author of "The Coming Race" would be the better for a perusal of the Professor's paper; for he mentions a bath, taken in the land of his friend Aph Linn, which had properties resembling those to which he attributes the success arising from the use of certain magnetic waters on this upper earth. Whether water will ever contain "Vril," we know not; that it cannot contain magnetism, we know.—EDS.]

QUINIA AND THE ERUPTION OF VARIOLA.—Dr. R. B. Bon-tecou writes to the *Medical Record*, of September 15, that in a case of variola in which quinia was given in two-grain doses three times daily, the eruption, which was so profuse as to threaten to become confluent, had almost wholly dried up, without pustulation, at the end of seven days. Tincture of iodine was applied to the face to prevent pitting; but this, he thinks, could have exerted no influence on the course of the eruption on other parts of the body.

MISCELLANY.

NAVAL MEDICAL SERVICE.—A disposition to supersede Dr. Wm. M. Wood in the office of Chief of the Bureau of Medicine and Surgery in the Navy Department has been recently manifested. Its origin is ascribed to certain persons of the naval line, who seek this mode of resenting that gentleman's efforts in favor of the law, passed at the close of last session of Congress, which gives a relative rank to medical officers and classes them in new grades. This faction has

made an alliance with the Secretary of the Navy, and indicates to him the removal on the ground that it was proposed in June, 1869, as a rule that chiefs of bureau should be superseded on reaching the age when officers of the Navy are withdrawn from active duty at sea, and are left, under the laws, eligible for shore-service only, except in certain cases; that only such officers as are legally qualified, for sea-service should be appointed bureau chiefs, and that the senior on the active list of each staff corps should be preferred to the post made vacant by this arbitrary rule. It was promised that the effect of its observance would be to make every staff officer in turn, as he reached the head of the active list, chief of bureau. Neither the impracticability of the theory nor the impolicy of frequently changing heads of departments was considered. Nor was objection discovered in the laws. One of them declares that these chiefs of bureau are "to hold their said offices for the term of four years;" and the Tenure of Office act provides that they are not to be removed without the concurrence of the Senate. As the law confides their appointment to the President and Senate of the United States, it was a bald assumption that the Secretary has authority to dismiss them at pleasure, in order to establish a rule which law contravenes.

It is not alleged that Dr. Wood is in any manner or degree inefficient. On the contrary, a majority of the medical corps has expressed cordially its satisfaction with his official conduct, and a desire that he may continue in office until the expiration of his legal term,—that is, till July 1, 1873,—when he will have attained the age of very little more than sixty-four years. What reason can justify the removal of an efficient and popular officer on the sole ground that he is sixty-two?

The Secretary of the Navy is a warm advocate of the observance of law, justice, and the will of the majority. If he has time to weigh carefully all the circumstances of the case, it is hardly probable that he will assist a faction in the accomplishment of its purpose on merely personal grounds.

There is no doubt that the medical profession will regret to learn that any member of it in the Government service has been unfairly or uncourteously treated, and will regard with interest the decision of this case.

AN ODD CAUSE OF DEAFNESS.—A patient applied the other day to Dr. Harlan, of this city, complaining of deafness in the right ear. A loudly-ticking watch could be heard only at two inches. Examination revealed a black mass firmly impacted in the meatus. It was removed after a good deal of difficulty and perseverance, when the watch could be easily heard at the other end of the room. The man was a "minstrel," and the cause of his deafness was a gradual accumulation in the meatus of burnt cork, with which he had been blacking his face every evening for some eight or ten years.

HONORS AND APPOINTMENTS.—Dr. Habershon has been chosen Lettsomian Lecturer in the Medical Society of London, in place of Dr. Hyde Salter, who has resigned the appointment.

M. Lacaze-Duthiers has been elected by the Academy of Sciences, Paris, to the seat left vacant by the death of Longet.

Prof. Henry S. Cheever, of the University of Michigan, has been elected to the Chair of Physiology and Microscopic Anatomy in the Long Island College Hospital of Brooklyn, New York.

Dr. W. W. Dawson has been elected to the professorship of Surgery in the Ohio Medical College, left vacant by the death of Prof. Blackman, and has accepted the appointment.

INCREASE OF INSANITY IN ENGLAND.—The report of the English Commissioners of Lunacy for the year 1870-71 shows that the proportion of insane persons to the general population of Great Britain has been steadily increasing within the last twenty years. In 1851 the ratio was 1.86 per thousand, and in 1871 it is 2.49. A part of this increase of cases of insanity is due to the vigilance with which the law against the private treatment of the insane is enforced, notwithstanding which, however, the Commissioners express the opinion that there are still large numbers of insane persons in England kept under private care and deprived of the benefits of periodical inspection. There still exists, it is stated, an insufficiency of accommodation for the insane of all classes, but especially of paupers.

THE NEW STYLE OF CHEMICAL NOTATION.—*The Physician and Pharmacist* for August, 1871, contains a notice of the recently-issued work on chemistry by John Attfield, Ph.D., F.C.S., etc., published by Henry C. Lea, of this city, from which we extract the following remarks on the new style of chemical notation: "It is to be regretted that the author uses exclusively the so-called new style of chemical notation, which is liable to so many objections. While some chemists adopt it, the majority object to it, saying it is only a change without an improvement,—that it tends to create confusion without adequate advantages, and that, being founded on ingenious theories without solid facts to support them, it is liable to be superseded at any time by some other more ingenious theories, making confusion worse confounded. For instance, chemists generally call sulphuric acid SO_3HO , while the advocates of the new style pretend it should be called H_2SO_4 . To this pretension it is answered, we know SO_3 free and HO free, we can unite them in direct combination, forming SO_3HO , and in the inverse manner from SO_3HO we can obtain SO_3 and HO separately: for these reasons we call sulphuric acid SO_3HO . When you show us SO_4 ,—a combination that no man has seen yet,—and when you turn it into sulphuric acid by the addition of H_2 , then we are ready to entertain your proposition. Till that time, we shall keep the usual notation, well understood by all, for fear somebody might propose to call sulphuric acid $\text{O}+\text{OH}_2\text{SO}+\text{O}$ or $\text{OH}_2\text{O}+\text{OSO}$, because it looks nicer on paper or answers better for some pet theory."

PROF. SAYRE.—It is pleasant to observe the courtesy with which Prof. Lewis A. Sayre, of the Bellevue Hospital Medical College, is received in London. Among other compliments tendered him, he was invited by the Governors of the Children's Hospital, Great Ormond Street, to deliver a lecture on The Treatment of Hip-Joint Disease. This lecture is reported in full in the *British Medical Journal* for July 22, 1871, and abounds in the practical suggestions as to treatment for which Prof. Sayre is so justly eminent.

PRELIMINARY STUDY OF CHEMISTRY.—At the recent meeting of the General Medical Council of Great Britain, the following motion was put and lost:

"That it is desirable that students should have the option of acquiring an adequate knowledge of chemistry, and of passing an examination in it, before they enter upon the period recognized by the licensing bodies as the course of professional study."

The object of the motion, made by Dr. Storrer, was a good one. The mover said that it was in the interest of the student and patient. It was agreed that four years' study was the

utmost limit that could be prescribed for professional study, and yet that period was still overcrowded with subjects. The proposition would reduce the pressure on the student by making an examination in chemistry precedent to the course of professional study, *optional* with the student. Since the motion of Dr. Storrer left the examination optional and not compulsory, we see no good reason why it should not have met the entire approval of the Council; and it certainly would have had the advantage claimed for it, of relieving, from the over-pressure to which they are subjected, those who might wish to take advantage of it.

CURIOSITIES OF LIFE.—The following, which we take from one of the daily papers, will, we think, be found interesting by many of our readers:

Half of all who live die before seventeen.

Only one person in ten thousand lives to be one hundred years old, and but one in a hundred reaches sixty.

The married live longer than the single.

There is one soldier to every eight persons, and out of every thousand born only ninety-five weddings take place.

If you take a thousand persons who have reached seventy years, there are of

Clergymen, orators, and public speakers	43
Farmers	40
Workmen	33
Soldiers	32
Lawyers	29
Professors	27
Doctors	24

These statements are very instructive. Farmers and workmen do not arrive at good old age as often as clergymen and others who perform no manual labor; but this is owing to the neglect of the laws of health, inattention to proper habits of life in eating, drinking, sleeping, dress, and the proper care of themselves after the work of the day is done. These farmers or workmen eat a heavy supper on a summer's day and sit around the doors in their shirt-sleeves, and, in their tired condition and weakened circulation, are easily chilled, laying the foundation for diarrhoea, bilious colic, pneumonia, or consumption.

CHOLERA.—The epidemic of cholera at present existing in portions of Europe seems to have taken its origin in Russia, where cases of the disease, it is said, have been frequent during the past two years. In July of this year it appeared in Wilna, and subsequently in other parts of Poland, and then passed into Germany. Königsberg in Prussia has suffered very severely, the number of cases not only being large, but the percentage of mortality also being great; and this, we learn from the daily papers, continues up to the time of writing. Cases have occurred in Berlin, but the disease has not yet been epidemic there. Vienna, thus far, seems to have escaped a visitation from it, and but few cases have been reported in Paris; there is, however, evidence, in the large increase in the number of deaths from diarrhoea which have recently occurred, of the presence in the latter city of an epidemic influence tending to the production of cholera. Cases have been reported to have occurred in various of the seaports of Great Britain, but up to this time the efforts made to prevent the spread of the disease have been successful. The disease has also appeared at Constantinople.

The season is so far advanced that it is most likely that the disease, if it occurs at all in this country, will not assume an

epidemic form. A feeling of security is, however, frequently a source of danger; and we hope, therefore, that the Health Officers, not only in this city but at all other commercial ports, will adopt preventive measures against the introduction of the disease into this country. A correspondent of the *London Times* recommends the sprinkling of the streets with carbolic acid as an excellent means to prevent the extension of cholera.

A HEATHEN OPINION AS TO THE FATE OF DOCTORS.—Lieutenant Masters, of the British Navy, who has been traversing Terra del Fuego, edifies his government with comments on the people, whom he represents as believers in devils, —who are departed spirits of doctors only. The chief business of life appears to be to keep these ghosts from doing mischief.

ANOTHER FASTING WOMAN.—Some of the English journals contain an account of another case of a fasting woman, even more remarkable than that of the celebrated Welsh girl. She is thirty-three years old, became rather suddenly sick about three years ago, is now completely bedridden, and has not eaten anything for nearly two years. Several doctors have attended her during that time, but, as none of them have been able to give her substantial relief, her aunt, with whom she lives, has at length wisely determined that it is useless to continue to incur expense for medicines without any hope of cure. She gets very little sleep, and cannot bear a lighted candle in the room at night-time. The *London Lancet* of September 2, in commenting on this case, says, "It is to be regretted that the contributors to some of the papers are not compelled to take out a course of lectures on physiology. For their benefit we give the following facts. The whole affair is simply a matter of calculation. A healthy person at rest breathes about 480,000 cubic inches of air per diem, which in round numbers will give about 20,000 cubic inches for the amount of carbonic acid expired, or nearly 10,000 grains by weight, which contains eight ounces of solid carbon. This weight of carbon must be supplied per diem to a healthy person to maintain the ordinary weight. A debilitated woman lying in bed might exhale somewhat less,—say five ounces, or even four ounces. In this case, supposing that she consumes no food at all, she would lose a pound in four days, or a stone in fifty-six days; but our patient has managed to live nearly, if not quite, five hundred days: consequently she must have lost at least five stone of carbon alone in that time. But death ensues by inanition when the body has lost about forty per cent.; so that even were her original weight twelve stone she could scarcely be alive now. But no account has here been taken of the nitrogen, of the hydrogen, or of the salts, leaving the body by the natural channels of the skin, kidneys, and bowels, and over the discharge of which the woman can exert no control, and which would collectively considerably exceed the carbon in weight."

The alleged intolerance of a lighted candle in the night is certainly a peculiar and a somewhat suggestive feature of her case.

PRIZE ESSAY ON "DISEASES OF CHILDREN."—The President of the Medical Society of the County of New York, Dr. Abraham Jacobi, has placed in the hands of its Treasurer four hundred dollars (\$400), to be awarded for the best essay on "A History of the Diseases of Infancy and Childhood in the United States, and of their Pathology and Therapeutics."

Competitors will send their essays in English, with motto attached, and the name and address of the writer, with the

same motto, in a sealed envelope, to the present Secretary of the Society, Dr. Alfred E. M. Purdy, 123 East Thirty-Eighth Street, New York, on or before January 1, 1873.

The Committee are authorized by the Society to withhold the prize if the essays submitted should not merit it.

Committee—Austin Flint, M.D., Ernst Krackowizer, M.D., and Edward S. Dunster, M.D.

This prize is open for universal competition.

NEW TEST FOR BLOOD-STAINS.—J. W. Gunning (*Journal of Applied Chemistry*) has discovered that acetate of zinc will precipitate the coloring matter of blood from solutions. The flocculent precipitate must be washed by decantation, and left to evaporate and dry on a watch-glass, and, if blood has been present, the microscope will reveal delicate hæmin crystals.

A REMEDY FOR A POOR MEMORY.—The *British Medical Journal* for July 1, 1871, says that a person named G. M. Rauffer puffs and sells, under the name of "Lemonade for Strengthening the Memory," a fluid mixture of about thirty grammes, containing fifteen parts of phosphoric acid, fifteen of glycerine, and seventy of water. This is sold in Vienna.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending	
	Sept. 16.	Sept. 23.
Consumption	32	48
Other Diseases of Respiratory Organs	31	15
Diseases of Organs of Circulation	10	12
Diseases of Brain and Nervous System	39	35
Diseases of the Digestive Organs	43	26
Diseases of the Genito-Urinary Organs	4	7
Zymotic Diseases	21	21
Debility	35	20
Cancer	7	7
Casualties	16	15
Murder	0	1
Suicide	1	2
Old Age	9	13
Stillborn	10	17
Tetanus	0	2
Scrofula	2	0
Unclassifiable	9	12
Unknown	1	5
Totals	270	258
Adults	131	152
Minors	139	106

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM SEPTEMBER 5, 1871, TO SEPTEMBER 18, 1871, INCLUSIVE.

PETERS, DE WITT C., SURGEON.—By S. O. 347, War Department, A. G. O., September 5, 1871, relieved from duty in Department of the Missouri, to proceed to New York City, and, upon arrival, report by letter to the Surgeon-General.

WINNE, CHAS. K., SURGEON.—By S. O. 204, Department of Dakota, September 7, 1871, assigned to duty at Fort Shaw, M. T.

MCELDERRY, H., ASSISTANT-SURGEON.—By S. O. 346, Headquarters of the Army, A. G. O., September 4, 1871, granted leave of absence for four months.

CRONKHITE, H. M., ASSISTANT-SURGEON.—By S. O. 359, War Department, A. G. O., September 14, 1871, granted leave of absence for three months.

GIRARD, A. C., ASSISTANT-SURGEON.—By S. O. 177, Department of Texas, August 29, 1871, assigned to duty at Fort Brown, Texas.

STEINMETZ, WM. R., ASSISTANT-SURGEON.—By S. O. 177, C. S., Department of Texas, assigned to duty at Fort Duncan, Texas.

HARVEY, P. F., ASSISTANT-SURGEON.—By S. O. 177, C. S., Department of Texas, assigned to duty at Ringgold Barracks, Texas.

STUDENTS' SUPPLEMENT.

UNIVERSITY OF PENNSYLVANIA, MEDICAL DEPARTMENT.

(NINTH STREET, BETWEEN CHESTNUT AND MARKET.)

MEDICAL FACULTY.

GEORGE B. WOOD, M.D., Emeritus Professor of Theory and Practice of Medicine.

SAMUEL JACKSON, M.D., Emeritus Professor of Institutes of Medicine.

HUGH L. HODGE, M.D., Emeritus Professor of Obstetrics and Diseases of Women and Children.

HENRY H. SMITH, M.D., Emeritus Professor of Surgery.

JOSEPH CARSON, M.D., Professor of Materia Medica and Pharmacy.

ROBERT E. ROGERS, M.D., Professor of Chemistry.

JOSEPH LEIDY, M.D., Professor of Anatomy.

FRANCIS G. SMITH, M.D., Professor of Institutes of Medicine.

RICHARD A. F. PENROSE, M.D., Professor of Obstetrics and Diseases of Women and Children.

ALFRED STILLÉ, M.D., Professor of Theory and Practice of Medicine and of Clinical Medicine.

D. HAYES AGNEW, M.D., Professor of Surgery.

H. LENOX HODGE, M.D., Demonstrator of Anatomy.

CLINICAL LECTURERS.

ALFRED STILLÉ, M.D., Professor of Clinical Medicine, lectures at the Philadelphia Hospital.

Lectures are delivered by the following-named gentlemen at the University:

D. HAYES AGNEW, M.D., Professor of Surgery.

WILLIAM PEPPER, M.D., Lecturer on Clinical Medicine.

JAMES TYSON, M.D., Diseases of the Urinary Organs.

WILLIAM GOODELL, M.D., Diseases of Women and Children.

GEORGE STRAWBRIDGE, M.D., } Diseases of the Eye
WILLIAM F. NORRIS, M.D., } and Ear.

JAMES E. GARRETSON, M.D., Surgical Diseases of the Mouth.

L. A. DUHRING, M.D., Dermatology.

The regular winter course of instruction begins on the second Monday in October, and continues until the last day of February.

EXPENSES.

Matriculating fee (paid only once) . . . \$5

Fees for winter course of lectures . . . 1.40

Graduating fee . . . 30

R. E. ROGERS, M.D.,
Dean of the Medical Faculty,
University Building.

W. H. SALVADOR, *Janitor,*
University Building.

LECTURES ON REGIONAL ANATOMY.

DR. H. LENOX HODGE will deliver a course of Lectures on REGIONAL ANATOMY, beginning early in October, and continuing during the winter. The demonstrations upon the *cadaver* will be illustrated by preparations from the great museum of the University.

Every table in the DISSECTING-ROOMS has a stone top, which can be kept perfectly clean. There are marble wash-basins and private closets, in which students can keep their instruments, books, and clothing clean and safe. The height of the room has been nearly doubled, extensive skylights introduced, and the ventilation rendered as perfect as possible.

The *cadaver* is preserved and injected by new and better processes, and, as dissection is legalized in Pennsylvania, the cost is very small.

Tickets, \$10.

Apply to

H. LENOX HODGE, M.D.,
901 Walnut St., Philadelphia.

DR. C. T. HUNTER will give special instruction in Operative and Minor Surgery, including operations on the *cadaver*, application of bandages, etc.

Fee \$10

For further information, address

R. E. ROGERS, M.D.,
Dean of the Medical Faculty,
University Building.

SPRING AND AUTUMN COURSE OF 1872.

Besides the regular winter course of instruction in the above branches, there will be a full course of clinical and didactic lectures, in addition to the courses of the Auxiliary Faculty, during the months of March, April, May, June, and September.

The lectures of the AUXILIARY FACULTY comprise the following subjects:

Zoology and Comp. Anat'y, by HARRISON ALLEN, M.D.

Botany, by HORATIO C. WOOD, JR., M.D.

Mineralogy and Geology, by FERD. V. HAYDEN, M.D.

Hygiene, by HENRY HARTSHORNE, M.D.

Medical Jurisprudence, including Toxicology,
by JOHN J. REESE, M.D.

The branches of Natural History, forming the subjects of the three professorships first named, will be taught mainly with reference to their medical relations.

All students who have matriculated in the Medical Department, and have taken the tickets of two of the Medical Faculty, have the right of admission to the lectures. Attendance upon these lectures is not compulsory upon the students in the Medical Department.

The degree of Doctor of Philosophy will be conferred upon those medical graduates who shall have attended two courses of lectures, and have passed a satisfactory examination thereon by the Faculty. To such, a diploma will be granted by the University.

The following SPECIAL COURSES OF CLINICAL AND DIDACTIC INSTRUCTION will also be given:

Clinical Surgery, D. HAYES AGNEW, M.D.

Clinical Medicine, }

Physical Diagnosis, } WILLIAM PEPPER, M.D.

Microscopy and Urinary Chemistry, }

Diseases of Urinary Organs, } JAS. TYSON, M.D.

Diseases of Women and Children, Wm. GOODELL, M.D.

Syphilis and Skin Diseases, HARRISON ALLEN, M.D.

Diseases of the Eye and Ear, } G. STRAWBRIDGE, M.D.
WM. F. NORRIS, M.D.

Surgical Diseases of the Mouth, J. E. GARRETSON, M.D.

Morbid Anatomy, JOSEPH G. RICHARDSON, M.D.

Dermatology, L. A. DUHRING, M.D.

The Lectures will begin on Monday, April 1, 1872, and continue until June 22.

The Preliminary Lectures in the Autumn will begin on Monday, September 2, and terminate on October 5.

These lectures will be so arranged as not to interfere with the abundant clinical instruction given at the Philadelphia, Pennsylvania, and Wills Hospitals.

ALL MATRICULATES of the University are admitted *without charge* to these lectures.

. Alumni of the Medical Department of the University, and others who desire to receive the Catalogue and Announcement, are requested to send their addresses to the Dean, P.O. Box 2630, Philadelphia.

JEFFERSON MEDICAL COLLEGE.

FACULTY.

JOSEPH PANCOAST, M.D., Professor of General, Descriptive, and Surgical Anatomy.
 SAMUEL D. GROSS, M.D., LL.D., Professor of Institutes and Practice of Surgery.
 S. HENRY DICKSON, M.D., LL.D., Professor of Practice of Medicine.
 ELLERSLIE WALLACE, M.D., Professor of Obstetrics and Diseases of Women and Children.
 B. HOWARD RAND, M.D., Professor of Chemistry.
 JOHN B. BIDDLE, M.D., Professor of Materia Medica and General Therapeutics.
 J. AITKEN MEIGS, M.D., Professor of Institutes of Medicine and Medical Jurisprudence.

J. M. DA COSTA, M.D., Lecturer on Clinical Medicine,
 R. J. LEVIS, M.D., Lecturer on Ophthalmic Surgery.

W. H. PANCOAST, M.D., Demonstrator of Anatomy.

The regular winter course of instruction begins in the early part of October, and continues until the last day of February.

EXPENSES.

Matriculating fee	\$5
Fees for winter course of lectures	140
Graduating fee	30

For further information respecting the regular winter course, address

B. HOWARD RAND, M.D.,
Dean of the Faculty,
At the College.

THE ANATOMICAL ROOMS

Are open during the summer and winter course of lectures of the College.

From the excellent accommodations of the rooms, and the cheapness of material, students have great facilities of perfecting their knowledge of Anatomy. During the summer, an ample opportunity is afforded for dissection, as the lectures of the summer school are given in the morning.

Lectures will be given during the summer, in connection with the dissecting-rooms, on General and Descriptive Anatomy, as during the winter.

Fee	\$10
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A course on Operative and Minor Surgery is given, in connection with the rooms, by the Demonstrator and First Assistant Demonstrator.

Fee	\$20
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WM. H. PANCOAST, M.D.,
Demonstrator,
1100 Walnut Street.

DR. T. H. ANDREWS, } *Assistant Dem-*
 DR. H. LEAMAN, } *onstrators.*
 DR. R. M. TOWNSEND, }

While it has not been found practicable to extend the

regular course beyond the usual period, from October to March, yet the Faculty, wishing to afford the fullest opportunity to the student, have arranged a course of supplementary lectures, which extends through the months of April, May, June, and September, without additional charge, except the registration fee of five dollars.

SUMMER COURSE OF LECTURES.

THE SUMMER COURSE OF LECTURES in this College will begin on Monday, April 2, 1872, and continue until June 23.

A Preliminary Course on different subjects by the Summer School Faculty will be delivered, *free of charge*, in the autumn, commencing on the 3d of September, and ending on the 6th of October.

The Clinical Department of the course will be illustrated at the College, Wills Hospital, and the Philadelphia and Pennsylvania Hospitals, by members of the association, during their terms of service at these institutions.

The course will be strictly practical, embracing important specialties in Medicine and Surgery, with extensive clinical illustrations.

The Lectureships are constituted as follows:

Clinical Surgery	PROFESSOR GROSS.
Medical Jurisprudence and Toxicology,	} PROFESSOR RAND.
Materia Medica and Therapeutics,	
Alimentation in Health and Disease,	
Clinical Medicine	DR. J. M. DA COSTA.
Visceral and Surgical Anatomy,	DR. W. H. PANCOAST.
Operative and Minor Surgery,	DR. J. H. BRINTON.
Ophthalmic and Aural Surgery,	DR. R. J. LEVIS.
Venereal and Cutaneous Diseases,	DR. F. F. MAURY.
Pathological Anatomy	DR. W. W. KEEN.
Surgical Diseases of the Genito-Urinary Organs (<i>special attention will be given to the Clinical study of the Urine</i>),	} DR. S. W. GROSS.
Laryngoscopy and Diseases of the Throat,	
Insanity	DR. I. RAY.
Clinical Midwifery, with Cases,	DR. F. H. GETCHELL.

Attendance upon the summer course is allowed as office instruction, but does not count as a "session" of lectures.

The Preliminary Lectures in the fall will begin on Monday, September 3, 1872, and continue until the opening of the regular course. *They are free to all.* The dissecting-room will be opened at the same time.

Matriculates of the College will be entitled to attend the entire course on payment of a registration fee of \$5. Non-matriculates will pay in addition \$35, which will be deducted from the fees of the winter course when the tickets for that course are issued.

Abundant clinical instruction is also afforded throughout the entire year, without extra charge, at the Pennsylvania, Philadelphia, Wills, and Orthopædic Hospitals.

For further information respecting the summer course of lectures, address

F. F. MAURY, M.D.,
Secretary of the Summer Association,
At the College, or at 1218 Walnut St.

PHILADELPHIA, October 2, 1871.

HOSPITALS.

PENNSYLVANIA HOSPITAL.

(227 beds.)

Physicians, J. F. MEIGS, M.D., J. M. DA COSTA, M.D.,
J. H. HUTCHINSON, M.D., J. AITKEN MEIGS,
M.D.

Surgeons, ADDINELL HEWSON, M.D., WM. HUNT,
M.D., THOMAS J. MORTON, M.D., R. J. LEVIS,
M.D.

Microscopist, J. G. RICHARDSON, M.D.

Pathological Chemist, HORACE B. HARE, M.D.

Pathologist and Curator, MORRIS LONGSTRETH, M.D.

Medical and Surgical Clinics throughout the year
from 10 to 12 on Wednesdays and Saturdays.

Tickets may be procured, free of charge, by applica-
tion to the Steward of the Hospital.

PHILADELPHIA HOSPITAL.

(700 beds.)

Physicians, J. L. LUDLOW, M.D., ALFRED STILLÉ,
M.D., WM. PEPPER, M.D., H. C. WOOD, JR.,
M.D.

Surgeons, W. H. PANCOAST, M.D., F. F. MAURY,
M.D., J. H. BRINTON, M.D., H. ALLEN, M.D.

Obstetricians, R. M. GIRVIN, M.D., E. L. DUER, M.D.,
J. S. PARRY, M.D., GEORGE PEPPER, M.D.

Microscopist, JAMES TYSON, M.D.

Curator and Pathologist, WILLIAM PEPPER, M.D.

Clinical Lectures delivered throughout the year (with
the exception of July and August) on Wednesdays and
Saturdays. Lectures on Obstetrics and Diseases of
Women, by Obstetrical Staff, at 9 A.M.; Lectures on
Clinical Medicine, by the Physicians, at 10 A.M.; Lec-
tures on Clinical Surgery, by the Surgeons, at 11 A.M.
These lectures are free to all.

Special bedside instruction during the winter: in
Practical Medicine, including Physical Diagnosis and
Application of Electricity to Diagnosis and Treatment
of Disease, by Drs. W. PEPPER and WOOD; in Prac-
tical Surgery, by Dr. ALLEN.

EPISCOPAL HOSPITAL.

(130 beds.)

Physicians, A. M. SLOCUM, M.D., J. C. MORRIS, M.D.,
HORACE B. HARE, M.D., HERBERT NORRIS,
M.D.

Surgeons, JOHN ASHHURST, JR., M.D., WM. S. FORBES,
M.D., SAMUEL ASHHURST, M.D., J. H. PACKARD,
M.D.

Dispensary Staff, J. G. RICHARDSON, E. J. SANTEE, W.
SINKLER, H. S. SCHELL, W. H. FINN, J. V.
INGHAM, JOHN A. HALL, C. B. NANCREDE.

Dr. HERBERT NORRIS will give practical instruction
in Physical Diagnosis at the bedside, during the months
of April, May, and June, on Tuesdays and Thursdays,
at 11 A.M. Fee, \$10.

GERMAN HOSPITAL.

(50 beds.)

Physicians, ALBERT FRICKE, M.D., JULIUS SCHROTZ,
M.D., EMIL FISCHER, M.D., JULIUS KÄMERER,
M.D.

Surgeons, THEODORE A. DEMME, M.D., JOSEPH KOER-
PER, M.D., JAMES M. BOISNOT, M.D., AUGUSTUS
F. MÜLLER, M.D.

Resident Physician, M. FRANKLIN, M.D.

WILLS HOSPITAL.

(RACE STREET, BETWEEN EIGHTEENTH AND NINE-
TEENTH STREETS.)

Attending Surgeons, T. G. MORTON, M.D., A. DOUG-
LASS HALL, M.D., R. J. LEVIS, M.D., GEO. C.
HARLAN, M.D.

Assistant Surgeons, W. THOMSON, M.D., W. W. MC-
CLURE, M.D., H. E. GOODMAN, M.D., L. H.
ADLER, M.D.

Daily Clinics at 11 o'clock A.M.

Operative Clinics on Wednesdays and Saturdays, at
12½ o'clock. Attendance free.

During the months of November, December, and
January, Drs. LEVIS, HARLAN, and THOMSON will give
a course of lectures, didactic and clinical, on Ophthal-
mic Surgery. Fee, \$10.

During April and May, Dr. HALL will give Ophthal-
moscopic demonstrations at the Hospital. Fee, \$10.

ORTHOPÆDIC HOSPITAL.

(NO. 15 NORTH NINTH ST., OPPOSITE UNIVERSITY OF
PENNSYLVANIA.)

Attending Surgeons, D. H. AGNEW, M.D., T. G. MOR-
TON, M.D., H. E. GOODMAN, M.D., S. W. GROSS,
M.D.

Attending Physician, S. WEIR MITCHELL, M.D.

ST. MARY'S HOSPITAL.

(85 beds.)

Attending Physicians, J. CUMMISKEY, M.D., C. PERCY
LA ROCHE, M.D., LUCIUS S. BOLLES, M.D.

Attending Surgeons, W. W. KEEN, M.D., J. H. GROVE,
M.D., A. D. HALL, M.D., H. S. SCHELL, M.D.

Resident Surgeons, S. BROUGH, M.D., J. O'NEILL, M.D.

Daily Dispensary service is held as follows: Surgical
Diseases, Mondays and Thursdays, 1-3 P.M., Drs. T.
B. REED and F. H. GROSS; Diseases of the Eye and
Ear, Tuesdays and Fridays, 10½-11½ A.M., J. H. GROVE,
M.D.; Medical Dispensary, Tuesdays and Fridays, 1-5
P.M., J. CUMMISKEY, M.D.; Diseases of Women, Wed-
nesdays and Saturdays, 1-5 P.M., J. H. GROVE, M.D.

CHILDREN'S HOSPITAL.

(TWENTY-SECOND STREET, BELOW WALNUT.)

Physicians, HILBORNE WEST, M.D., JAMES H. HUT-
CHINSON, M.D., D. MURRAY CHESTON, M.D.,
WM. PEPPER, M.D.

Surgeons, H. LENOX HODGE, M.D., GEORGE C. HAR-
LAN, M.D., JOHN ASHHURST, JR., M.D.

Assistant Physicians, GEORGE A. REX, M.D., HORACE
WILLIAMS, M.D.

ST. JOSEPH'S HOSPITAL.

(200 beds.)

Physicians, J. J. REESE, M.D., GEORGE K. MOREHOUSE,
M.D., WM. V. KEATING, M.D., JAMES TYSON,
M.D.

Surgeons, C. S. BOKER, M.D., W. F. ATLEE, M.D.,
E. A. PAGE, M.D., J. H. BRINTON, M.D.

Obstetricians, J. D. BRYANT, M.D., A. C. BOURNON-
VILLE, M.D.

Pathologist, JOSEPH LEIDY, M.D.

AUTUMN AND WINTER SESSION OF 1871-72.

	UNIVERSITY OF PENNSYLVANIA.			JEFFERSON MEDICAL COLLEGE.			PENNSYLVANIA HOSPITAL.			PHILADELPHIA HOSPITAL.	
	Lecturers.	Days and Hours.	Fees.	Lecturers.	Days and Hours.	Fees.	Lecturers.	Days and Hours.	Fees.	Lecturers.	Days and Hours.
<i>Anatomy</i>	Leidy	M 11 A.M. Tu Th F 3.30 P.M.	\$20	Pancoast	M Tu Th F 4 P.M.	\$20	.....	.....	.....	.....	.....
<i>Surgery</i>	Agnew	Tu Th F 12 M.	\$20	Gross	M Tu Th F 11 A.M.	\$20	.....	.....	.....	.....	.....
<i>Physiology</i>	F. G. Smith	M W S 5 P.M.	\$20	J. A. Meigs	M Tu F 5 P.M.	\$20	.....	.....	.....	.....	.....
<i>Materia Medica</i>	Carson	M 12 M. Tu Th F 4.30 P.M.	\$20	Biddle	W S 4 P.M. Th 12 M.	\$20	.....	.....	.....	.....	.....
<i>Chemistry</i>	Rogers	Tu Th F 11 A.M.	\$20	Rand	M Tu F 12 M.	\$20	.....	.....	.....	.....	.....
<i>Practice of Medicine</i> ...	Stillé	M Tu Th F 10 A.M.	\$20	Dickson	M Tu Th F 10 A.M.	\$20	.....	.....	.....	.....	.....
<i>Obstetrics and Diseases of Women and Children</i>	Penrose	M W S 4 P.M.	\$20	Wallace	W Th S 5 P.M.	\$20	.....	.....	.....	.....	.....
<i>Regional Anatomy</i>	Hodge	Tu F 7 P.M.	\$10	W. H. Pancoast	Tu Th F 7 P.M.	\$10	.....	.....	.....	.....	.....
<i>Practical Anatomy</i> ...	The Dissecting-room will be open throughout the day and evening. Abundant material for dissection, at small cost.			The Dissecting-room will be open throughout the day and evening. Abundant material for dissection, at small cost.			.....	.....	.....	.....	.....
<i>Operative and Minor Surgery</i>	Hunter	At convenient hour.	\$10	W. H. Pancoast	M 7 P.M.	\$10	.....	.....	.....	.....	.....
<i>Clinical Medicine</i>	W. Pepper	Tu F 1 P.M.	Free to matriculates.	Da Costa	M Th 1 P.M.	Free to matriculates.	J. F. Meigs; after Nov. 1, Da Costa, Hutchinson	W S 10 A.M. S 10 A.M. W 10 A.M.	Free to all.	Ludlow, Stillé	W 10 A.M. S 10 A.M.
<i>Clinical Surgery</i>	Agnew	W S 12.30 P.M.	Free to matriculates.	Gross; after Jan. 1, Pancoast	W S 12 M. W S 12 M.	Free to matriculates.	Morton, Levis; after Feb. 1, Hewson, Hunt	S 11 A.M. W 11 A.M. S 11 A.M.	Free to all.	Pancoast, Maury, Brinton, Allen	W S 11 A.M.
<i>Clinical Midwifery and Diseases of Women and Children</i> .	Goodell	M 1 P.M.	Free to matriculates.	Wallace	Tu 1 P.M.	Free to matriculates.	.....	.....	.....	G. Pepper, Duer	W 9 A.M. S 9 A.M.
<i>Special Ward Instruction in Clinical Medicine</i>.....	.....	.....	.....	.....	.....	.....	Hutchinson	At convenient hour.	\$15	W. Pepper	At convenient hour.
<i>Diseases of Eye and Ear and Ophthalmoscopy</i>	Norris and Strawbridge	Th 1 P.M.	Free to matriculates.	Lévis	F 1 P.M.	Free to matriculates.	.....	.....	.....	Wood	Tu F 8.15 A.M.

COLLEGE OF PHARMACY.			PENNSYLVANIA COLLEGE OF DENTAL SURGERY.			PHILADELPHIA DENTAL COLLEGE.			SPECIAL COURSES.		
Lecturers.	Days and Hours.	Fees.	Lecturers.	Days and Hours.	Fees.	Lecturers.	Days and Hours.	Fees.	Lecturers.	Days and Hours.	Fees.
.....	Mears	Tu Th S 12 M.	\$16½	Allen	M W F 8 P.M.	\$20	Keen, at Philadelphia School of Anatomy	M Tu W F 7 P.M.	\$10
.....	Tyson	M W F 12 M.	\$16½	McQuillen	M W F 5 P.M.	\$20
Maisch	W 8.30 P.M. F 7.30 "	\$12
Bridges	M F 8.30 P.M.	\$12	Buckingham	Tu Th S 5 P.M.	\$16½	Howell	Tu Th S 4 P.M.	\$20
Parrish	M W 7.30 P.M.	\$12
.....	A. H. Smith, at Nurses' Home	M W F 8.30 P.M.	\$15
.....	W. F. Jenks, at Philadel- phia Dispen- sary	\$15
.....	Keen	Tu 8 P.M.	\$10
.....	Mears	W 11 A.M.	Free to matricu- lates.	Allen	W 2 P.M.	Free to matricu- lates.
.....	Wildman	M W F 5 P.M.	\$16½	Smith	M W F 4 P.M.	\$20
.....	Barker	Tu Th S 4 P.M.	\$16½
.....	Truman	M W F 4 P.M.	\$16½	Stellwagen	Tu Th S 5 P.M.	\$20
.....	Levis, Harlan, Thomson, at Wills Hospital	At conven- ient hour	\$10
.....	Keyser, Collins, Millick, at Philadel- phia Eye and Ear In- firmery	F 7.30 P.M. Tu " " M F 12½-2 P.M. Th 1-2 P.M.	Free "
.....	Hutchinson, at 920 Chest- nut Street	At conven- ient hour	\$15
.....	O. P. Rex, at Philadelphia School of Anatomy	"	\$10
.....	Tyson, Richardson	"	\$15
.....	Hare	"	\$15
.....	Duhring	W S 10.30 A.M.	\$10
.....	Bertolet, at 920 Chest- nut Street	At conven- ient hour	\$10

PHILADELPHIA COLLEGE OF PHARMACY.

FACULTY.

ROBERT BRIDGES, M.D., Professor of Chemistry, No. 119 South Twentieth Street.

EDWARD PARRISH, Professor of Theory and Practice of Pharmacy, No. 800 Arch Street.

JOHN M. MAISCH, Professor of Materia Medica and Botany, No. 1607 Ridge Avenue.

ANNOUNCEMENT.

The annual courses of instruction in the College commence on the first Monday in October, at 7½ o'clock P.M., and will be continued tri-weekly, on Monday, Wednesday, and Friday of every week, at seven and eight o'clock P.M., until the close of February.

The course on Botany, by Professor MAISCH, will be conducted during the spring and summer. One afternoon a week, commencing in April, will be devoted to these lectures and excursions into the country, affording to the students a means of becoming practically acquainted with the living plants.

Especial attention will be given to the art of dispensing medicines.

FEES.

For each Course of Lectures	\$12
Matriculation Fee (paid but once)	4
Graduating Fee	10

PHILADELPHIA LYING-IN CHARITY.

(126 NORTH ELEVENTH STREET.)

LECTURES ON PRACTICAL OBSTETRICS,

WINTER, 1871-72.

The Winter Course on Practical Obstetrics will be delivered by Dr. A. H. SMITH, commencing Wednesday, October 18, at 8½ o'clock P.M., and continuing, Monday, Wednesday, and Friday of each week, at 8½ P.M., to the end of February.

Pupils are taught carefully all the details of the management of labor, in simple and complicated cases,—especially the diagnosis of position, and forceps-application, as well as the training of monthly nurses.

As many of the members of the class as desire it will have the obstetric patients of the PHILADELPHIA LYING-IN CHARITY assigned to them, during any part or the whole of the period from the 1st of October to the 1st of March, for their professional care and attendance, with the aid of the assistants, if necessary, and under the supervision of the Principal.

Fee for the Course, including practice, \$15.

OBSTETRIC DEPARTMENT OF THE PHILADELPHIA DISPENSARY.

A Course of Lectures will be given on the Mechanism of Labor and Operative Obstetrics, by Dr. W. F. JENKS, one of the Obstetric Physicians to the Philadelphia Dispensary.

Three Didactic Lectures will be delivered each week, and an opportunity will be afforded to each student to become thoroughly familiar with the details of the operation under consideration, by practice on the Manikin and Cadaver.

The obstetric cases which occur in the practice of the Philadelphia Dispensary will be distributed in

rotation to those students who may desire to attend them, after their names have been registered with Dr. Williams (No. 1711 Pine Street, 8 to 10 A.M.).

It is hoped that by this means the students of the class will become familiar with the conduct of normal labor, the indications for operative interference, and the care of the patient during the puerperal state.

The first Lecture will be delivered October 25, in Chant Street.

Fee for the Course of Lectures	\$10
Fee for Registration	5

SPECIAL COURSES OF LECTURES.

PHILADELPHIA SCHOOL OF ANATOMY.

(CHANT STREET, TENTH STREET, ABOVE CHESTNUT.)

COURSES OF LECTURES ON PRACTICAL SUBJECTS.

The following Courses of Lectures will be delivered in this institution during the *Winter Session* of 1871:

I. Anatomy	DR. W. W. KEEN.
II. Operative Surgery	DR. W. W. KEEN.
III. Bandaging, Fractures, and Fracture-Dressings }	DR. O. H. ALLIS, 1005 Walnut St.
IV. Physical Diagnosis	DR. O. P. REX.

The WINTER COURSE OF LECTURES on *Anatomy* will begin on Tuesday, October 10, 1871, at 7 P.M., and will continue until the end of February, 1872.

A systematic course of Lectures on *Descriptive and Surgical Anatomy* will be delivered on Mondays, Tuesdays, Wednesdays, and Fridays, at 7 P.M., illustrated by dissections, models, drawings, etc. The microscopic anatomy of the various tissues will be shown by the class microscope. Dissection will be carried on under the direct and personal supervision of the Assistant Demonstrators of Anatomy.

The Course on *Operative Surgery*, by Dr. W. W. KEEN, will begin on Tuesday, October 17, 1871, at 8 P.M.

Special arrangements may be made for private courses by candidates for the Army or the Navy, or by others.

The Course on *Bandaging, Fractures, and Fracture-Dressings*, by Dr. O. H. ALLIS, will begin on Tuesday, October 17, at 8 P.M.

The Course on *Physical Diagnosis* will be delivered by Dr. O. P. REX, with especial reference to diseases of the chest, beginning on Wednesday, October 18, at 8 P.M.

Fee for each Course, \$10.

For further information, apply to the Janitor, at the rooms, or to

W. W. KEEN, M.D.,
1619 Chestnut St. (3½ to 5 P.M.)

PHILADELPHIA HOSPITAL.

CLINICAL MEDICINE.

Dr. WILLIAM PEPPER will give a course of instruction during the winter months (beginning October 3) in the wards of the *Philadelphia Hospital*.

The special object of this course is to afford opportunities for acquiring thorough practical knowledge of *Physical Diagnosis*, the use of *Electricity* in the diagnosis and treatment of disease, the use of the *laryngoscope*, etc. The course will be given at hours which will not interfere with the lectures at the medical schools.

Fee for the Course, \$15.

Office Students will be received, who, in addition to special instruction, will have every facility afforded them in the prosecution of their medical studies.

Apply at 1215 Walnut Street.

Dr. H. C. WOOD will give a Course of Clinical Bed-side Instruction through the winter, at 8½ A.M., Tuesdays and Fridays. Fee, \$15.

THE WILLS OPHTHALMIC HOSPITAL.

(RACE STREET, BETWEEN EIGHTEENTH AND NINETEENTH STREETS.)

OPHTHALMIC SURGERY.

A Course of Lectures, Didactic and Clinical, on Ophthalmic Surgery, will be given at the Hospital during the months of November, December, and January.

The course will embrace all of the important branches of Ophthalmic Science, and will include the Anatomy and Pathology of the Eye, the Physiology of Vision, the Refraction and Accommodation of the Eye, the use of the Ophthalmoscope, and the Operative Surgery of the Eye.

The large Clinics of the Hospital will afford abundant opportunities for the demonstration of the General Diseases, Optical Defects, and Operative Surgery of the Eye.

Each member of the class will be afforded instruction in the use of the Ophthalmoscope, and in the practice of operations on the Cadaver.

The Diagnosis of the Optical Defects which produce Long, Short, or Weak Sight, Astigmatism, Strabismus, etc., and their correction by the scientific use of glasses, will be illustrated by apparatus and clinical demonstration.

Fee for the Course, \$10.

Operative and Clinical Surgery of the Eye,

R. J. LEVIS, M.D., N. W. cor. Arch and 13th Sts. Anatomy, General Diseases of the Eye, and Ophthalmoscopy,

GEO. C. HARLAN, M.D., 1806 Chestnut St. Physiology of Vision, Refraction, and Optical Defects of the Eye,

WM. THOMSON, M.D., 1607 Locust St.

LARYNGOSCOPY AND RHINOSCOPY.

Dr. BERTOLET will give instruction on the above subjects, during the winter months, at the Medical Institute, 920 Chestnut Street. Practical instruction will be given in the use of the Laryngoscope in the examination of patients.

Fee for the Course, \$10.

For further information, apply to

R. M. BERTOLET, M.D.,
107 South Thirteenth St.

DISPENSARY FOR SKIN DISEASES.

(NO. 216 SOUTH ELEVENTH STREET.)

DISEASES OF THE SKIN.

Dr. DUHRING will give a Course of Clinical Instruction upon this subject, beginning early in October. The lectures will be delivered at 10½ A.M. on Wednesday and Saturday of each week, and continue through October, November, and December.

Fee for the Course, \$10.

For further information, apply to

LOUIS A. DUHRING, M.D.,
127 South Eighteenth Street.

PHILADELPHIA EYE AND EAR INFIRMARY.

(ELEVENTH STREET, BETWEEN BUTTONWOOD AND SPRING GARDEN STREETS.)

SCHOOL OF OPHTHALMOLOGY AND OTOTOLOGY.

In accordance with one of the objects of the Philadelphia Eye and Ear Infirmary,—viz., "the advancement of the study and treatment of diseases and affections of the eye and ear,"—the trustees have regularly organized a School of Ophthalmology and Otology in connection with that institution, as follows:

P. D. KEYSER, M.D., Lecturer on Ophthalmology.

JAS. COLLINS, M.D., Lecturer on Otology.

J. W. MILLICK, M.D., Demonstrator of Ophthalmoscopy and Otoscopy.

A. B. ECKEL, *Secretary of Board of Trustees.*

The *Third Regular Winter Course of Instruction* will begin the first week of November, 1871, and will consist of

Didactic Lectures on Ophthalmology, Friday, 7½ P.M.

" " Otology, Tuesday, 7½ P.M.

Clinical Lectures on Ophthalmology, Mondays and Fridays, 12½–2 P.M.

" " Otology, Thursdays, 1–2 "

Courses on Practical Ophthalmoscopy and Otoscopy, Thursdays, 7½ P.M.

Lecturers' and Demonstrator's tickets free.

On the payment of five dollars, a certificate of attendance and proficiency will be given to graduates of medicine who have attended the course.

For tickets and further information, apply to or address

J. W. MILLICK, M.D.,
Assistant Surgeon, and Secretary of Medical Board.

AUSCULTATION AND PERCUSSION.

Dr. HUTCHINSON will begin a Course on the Methods of Physical Diagnosis, early in October, at the classroom of the Medical Institute, 920 Chestnut Street. Clinical instruction will be given in the medical wards of the Pennsylvania Hospital. Fee for the Course, \$15.

For further information, apply to

J. H. HUTCHINSON, M.D.,
2019 Walnut St.

PHYSICAL DIAGNOSIS.

Dr. HERBERT NORRIS will deliver a Course of Bed-side Clinical Instruction on Physical Diagnosis, in the wards of the Episcopal Hospital, during the months of April, May, and June. Fee for the Course, \$10.

PHYSIOLOGICAL AND PATHOLOGICAL LABORATORY.

PRACTICAL MICROSCOPY AND CHEMISTRY.

Drs. JAMES TYSON and HORACE BINNEY HARE will receive students in Practical Microscopy and Chemistry. They will be practically taught the process of qualitative and quantitative analysis of urine and other animal fluids, and the use of the microscope in the study of healthy and morbid tissues. Either course may be taken alone, or both unitedly.

Fee for the combined Course, \$20; for one Course, \$15.

Drs. Tyson and Hare are also prepared to undertake chemical and microscopical investigations for members

of the profession who have not at their disposal the time or appliances requisite.

The urine and its sediments, calculi, blood, milk, morbid growths, and other products of normal and diseased processes, will be examined microscopically, and by chemical analysis, qualitative or quantitative, as may be desired. The charges will be proportioned to the amount of labor involved in each case.

Communications and material for examination should be sent to 332 South Fifteenth Street, Philadelphia.

PRIVATE INSTRUCTION IN MEDICAL MICROSCOPY.

The applications of the microscope in medicine have of late years become so increasingly numerous, facile, and important that systematic acquaintance with the use of the instrument, as an aid to solving the many difficult problems of *diagnosis* and *prognosis*, is almost a necessity for every well-informed practitioner; indeed, the day seems not far distant when educated communities throughout the country will require of their physicians the constant resort to its manifestly invaluable revelations respecting disease.

In view of the demand thus created for more ample opportunities for gaining a practical knowledge of medical microscopy, the subscriber proposes to instruct a limited number of students and graduates, during the winter, by courses of fifteen lessons each, so arranged as to avoid interference with College lectures or other engagements.

Fee (including handbook), \$15.

JOSEPH G. RICHARDSON, M.D.,
Lecturer on Morbid Anatomy in the University of Penna.,
No. 1620 Chestnut Street, Philadelphia.

MEDICAL EXAMINATIONS.

The following Private Associations will give regular medical examinations in connection with the authorized text-books and the lectures at the schools.

In connection with the University of Pennsylvania:

DRS. BOLLING, H. LENOX HODGE, HUTCHINSON, HARLAN, CHESTON, I. MINIS HAYS, and BERTOLET will give Lectures and Examinations daily during the winter session.

Fee, \$30.

Office Students are received, through their preceptors, or upon their own application, for a part or the whole of a three-years course of study. They are admitted to the Winter Examinations and to the Summer School of Medicine, and thus have the benefit of a systematic course of examinations during both the winter and summer. They are instructed *practically* in Anatomy, Bandaging, Dressing of Fractures, Operative Surgery, Ophthalmoscopy, Percussion and Auscultation, Obstetrics, and Examination of Urine. They are also enabled to attend women during confinement.

Clinical Instruction is provided for them at the Pennsylvania Hospital, Philadelphia Hospital, Children's Hospital, and Wills Ophthalmic Hospital.

Bedside Instruction during February, March, and April is given them in the wards of the Pennsylvania Hospital by Dr. JAMES H. HUTCHINSON.

Fee for one year, \$100.

Candidates for admission to the Army or Navy, and those desiring promotion to a higher grade, may obtain the use of the class-rooms, and be furnished with private instruction.

DRS. JAS. TYSON, G. PEPPER, H. C. WOOD, C. T. HUNTER, H. B. HARE, and H. NORRIS will give regular Examinations during the winter.

Special Bedside Clinical Instruction will be given in the

wards of the Philadelphia Hospital,—in Clinical Medicine, by Dr. WOOD; in Diseases of Women, by Dr. GEORGE PEPPER; and in Clinical Medicine, by Drs. NORRIS and HARE, at the Episcopal Hospital.

Fee for the Examinations \$30

Fee for each Clinical Ticket 15

Office Students will be received for the whole or part of a three-years course of study. They will have the advantage of the Winter and Summer Examinations and the private courses of the members of the organization, which include *Special Bedside Instruction* at the various hospitals during the *entire year*.

They will have facilities for becoming practically acquainted with Obstetrics and Diseases of Women, in connection with the Lying-in Charity.

The students will have access throughout the year to the class-rooms, which are furnished with text-books, cabinet of materia medica, manikins, diagrams, etc., and will receive personal direction in the pursuit of their medical studies.

Fee for one year's office instruction, \$100.

Candidates for the Army and Navy are also received.

For further information, apply to any of the above gentlemen.

DRS. W. H. H. GITHENS, R. G. CURTIN, W. F. JENKS, DE F. WILLARD, and J. F. WILSON will examine students both in connection with the regular text-books, and also with the Lectures of the Faculty.

Fee for the Examinations, \$30.

Office Students will be received for the whole or part of the three-years course, and will, in addition to the clinical tickets to the various hospitals, receive the benefit of the Clinic on Diseases of Women at the Nurses' Home for six months in the year, thereby enabling them to perfect themselves in the practical manipulations of all instruments used in the treatment of uterine diseases.

A ticket will also be furnished for a Course of Lectures on the Mechanism of Labor and Operative Obstetrics, by Dr. JENKS, and an opportunity will be afforded *Office Students* to attend obstetric cases occurring in the practice of the Philadelphia Dispensary.

Office Students (one year), \$100.

The Association of Drs. ANDREWS, TOWNSEND, GROSS, and DEAL give daily *Examinations* upon the subject-matter of the lectures delivered in the *Jefferson Medical College*, in their *lecture-room* and *laboratory* in Butler's Avenue, immediately in the rear of the College.

Dr. T. H. ANDREWS, Anatomy and Practice of Medicine.

Dr. R. M. TOWNSEND, Physiology and Materia Medica.

Dr. S. W. GROSS, Surgery.

Dr. L. J. DEAL, Chemistry and Obstetrics.

Fee for the Course, \$30.

In connection with the Jefferson Medical College:

DRS. WARDER, MCARTHUR, LEAMAN, and HATFIELD will hold regular examinations during the winter months.

Fee for the Course, \$20.

DRS. KEEN, ALLIS, REX, LEFFMAN, and GETCHELL will hold regular examinations during the winter months.

ARMY AND NAVY MEDICAL SERVICE.

Dr. MEARS will continue the preparation of candidates for appointment in the Medical Corps of the Army and Navy. The requirements of the departments will be fully explained, and applicants will receive instruction in all the branches, principal and collateral, required by the Boards of Examination.

Candidates for promotion will be afforded opportunities for review and for practical instruction in Operative Surgery, Bandaging, etc.

For terms of instruction, or for further information, apply to

J. EWING MEARS, M.D.,
222 South Sixteenth Street.

MONDAY, OCTOBER 16, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON A CASE IN WHICH PAIN IN THE ABDOMEN WAS A PROMINENT SYMPTOM.

BY JAMES H. HUTCHINSON, M.D.,

One of the Attending Physicians to the Pennsylvania Hospital.

I INTEND this morning to call your attention to a case which illustrates the difficulty so often met with in the diagnosis of disease affecting the abdominal viscera. In this case pain is a very prominent symptom,—in fact, I might almost say has been at times the only indication that the patient was the subject of disease. Now, pain may attend almost any morbid process going on within the abdominal cavity, or, originating outside of it, may, as in caries of the vertebræ, be referred to it. It is, therefore, a symptom merely, and one which will render necessary the exercise of all the skill you possess in diagnosis to enable you to recognize the condition upon which it depends in any particular instance. The physical examination of the abdomen would seem to one inexperienced in clinical medicine easier than that of the chest, but practically it is found to be much more difficult, and you will consequently hear doubt as to the correct diagnosis more frequently expressed when the disease is situated below than when it is above the diaphragm.

The case before you, as I have said, illustrates the difficulty of diagnosis in abdominal disease. Although it has been under observation in the medical wards of this hospital for some months, I am unwilling to commit myself to a positive expression of opinion as to the nature of the lesion giving rise to the pain from which the patient has suffered for so long a time. I have brought the patient before you, however, because I have always found those cases in which the diagnosis is obscure to be the most interesting to the careful student of disease, and therefore the most instructive.

Without further prelude, I will read an abstract of the notes of the cases, for which I am indebted to the Resident Physician, Dr. James C. Wilson.

Louisa W., colored, æt. 21, single, a domestic, was admitted September 13, 1870. Her history is as follows: Her father died of typhoid fever, but her mother and all her brothers and sisters are still alive and in good health. Her previous health was good until about two years ago, when, late in the autumn, she had an attack of typhoid pneumonia, so called, accompanied by pain in her left chest, cough, rusty expectoration, fever, delirium, etc., and took quinia as a remedy. She was at this time a month in bed, and arose very thin and weak. Convalescence was slow, and it was not until the following spring that she was able to return to her work. She, however, finally regained her health and became fat and strong, and remained so until the early part of last winter, when, while acting as child's-nurse in one of the Southern States, she was attacked with neuralgic pains behind the left ear and in the occipital region, very acute, and paroxysmal in character. These lasted for about three months, and were succeeded by a cough, attended by slight mucous expectoration, but not by hæmoptysis or by pain in the chest. She had, however, at this time irregular febrile attacks about midday, followed by sweats towards and during the night. The cough was relieved at the end of three weeks, leaving behind it only a slight irritation of the air-passages. She began, however, to lose flesh and strength, her menses, which had, until her sickness, occurred regularly, ceased entirely, and she was troubled with severe pain in the epigastrium. This was paroxysmal

and very intense, appeared daily about noon, and lasted about an hour. During this time her appetite was poor, but there were no dyspeptic symptoms, such as vomiting or eructations. Her bowels were regularly moved; occasionally, too, she had attacks of pain in the back along the spine. This was most severe in the lumbo-sacral region, but was not aggravated during the paroxysms of pain in the epigastrium. There was no pain in the lower part of the abdomen, and micturition was not frequent or painful. A slight, inconstant, whitish vaginal discharge was complained of.

On admission, she was anæmic, emaciated, had almost constant elevation of temperature; her skin was dry and hard, her pulse quick and irritable, her tongue clean and glazed, her mind perfectly clear, and her special senses were unaffected. There were no signs of cardiac or pulmonary disease. When examined, the epigastric and right hypochondriac regions were found to be full, and an oval mass, with confused, obscure margins, and having a distinct impulse communicated to it, was felt occupying the epigastrium and extending slightly into the right hypochondrium. This mass was dull on percussion, was the seat of a non-expansile pulsation, and was not tender on pressure. The area of splenic dullness was not increased, nor was that of the right lobe of the liver. There was no tumor to be detected in any part of the abdomen.

On auscultation, a distinct musical systolic murmur was heard over the mass, changing its characters, however, from time to time. The pulsation of the femoral arteries was very distinct, and when pressure was made with the stethoscope upon them a distinct murmur could be heard. The urine was found on examination to be normal. She was ordered iodide of potassium and sulphate of quinia, together with a purgative. The purgative brought away a large quantity of solid feces, after which the epigastric tumor was observed to be smaller and the pulsation to be less marked.

November 9.—Very little improvement has taken place in the condition of the patient. There is at this time no tumor to be felt in the epigastrium, but the resistance of the recti muscles, which are very tense, is so great that it is impossible to make a very satisfactory examination. Her bowels act regularly, and her appetite has somewhat improved, but she is still harassed by pain in the epigastrium. There is no vomiting and no nausea. On palpation a pulsation is distinctly felt just below the ensiform cartilage, and when the patient is placed upon her hands and knees it disappears, and percussion shows a normal resonance of this region. On auscultation, an exceedingly rough but not loud murmur is heard. This murmur is occasionally only heard when pressure over the aorta is made, and is at all times much increased in intensity by it, and is not heard when the patient is placed in the position indicated above. No cardiac and no anæmic murmurs can be heard.

Pulse, 96; respiration, 16; temperature, 99.5°.

December 18.—No important change in the condition of the patient. She has occasional respites from pain, but her sufferings are generally intense, and are only relieved by large doses of morphia. No signs of disease of the lungs can be discovered by the physical methods of diagnosis. There are enlarged glands upon both sides of her neck, but especially on the right side, and an examination of the groin shows induration of the inguinal glands. When pressure is made with the hand over the lower part of the abdomen, enlarged glands can be felt within the abdominal cavity. A belladonna plaster is applied to the abdomen. The treatment consists in the administration of tonics and narcotics.

Before passing to the consideration of the symptoms presented by the case to-day, I will review the notes which I have just read to you. It is always important to do this, for we may learn in this way much in regard to the constitution of the patient. An illness may, moreover, be the direct or indirect result of one that has preceded it, and a careful study of a patient's previous history may thus sometimes enable us to make a correct diagnosis in a case in which it would otherwise be impossible.

The young girl before you appears to have had good health until two years ago, when the attack of pneu-

monia occurred. In spite of the very chronic course which this ran, she appears to have made in the end a fair recovery, and to have remained well until nearly a year ago. No destruction of either lung can have supervened, for there are to-day no physical signs of any marked disease within the chest. There is perhaps some harshness of the respiration under the clavicle on the right side, and the sound obtained upon percussion in that region is of higher pitch than in the corresponding part on the left side, but I do not think it is sufficiently so to indicate an aberration from the healthy condition. It is, however, probable that the illness from which she suffered two years ago has not been without its influence in producing the *anæmia* which is at present so prominent a feature of her case.

The neuralgic pains which occurred about nine months after she had recovered from the pneumonia may possibly have been of malarial origin, for she was then living at the South; or they may have owed their origin to *anæmia*. We have, unfortunately, very little clue to their real nature; but their occurrence shows a predisposition on the part of the patient to nervous disease. The cough and expectoration which succeeded the attack of neuralgia were probably dependent simply upon bronchitis, but tended, no doubt, to debilitate the patient still further.

We may now, I think, pass with advantage to the date of her admission here. At that time the pain in the abdomen was, as it has been ever since, a prominent symptom. She had suffered from it for at least six months. It was paroxysmal in character, but there was at all times a sense of uneasiness in the epigastric region. It was not accompanied by nausea or sickness of stomach, and we cannot learn that she had at any time thrown up blood either in an unaltered or in a partially-digested condition. Palpation and percussion led to the discovery of an ill-defined tumor below and to the right of the ensiform cartilage, and a distinct pulsation could be seen and felt in this region. Auscultation revealed the presence of a murmur, which was said occasionally to have had a musical quality; but more careful examination showed that the epigastric pulsation consisted in a forward impulse simply, and that no true expansile movement could be felt.

I have been thus explicit in stating the condition of the patient when admitted, because few physicians could have seen her then without having had suggested to their minds the possibility of the presence of aneurism of the abdominal aorta. The effect of the purgative, however, in removing the fecal accumulation in the colon, which was probably what had been mistaken for a tumor, rendered this view of the case less likely to be the correct one, and it is now my intention to endeavor to make, by a process of exclusion, a correct diagnosis.

In the first place, I do not think we have to do with an aneurism of the abdominal aorta. There is, at present, no distinct tumor in the epigastrium; the pulsation, which still continues, is of the character previously noted; there is no expansile movement of the abdomen, and no protrusion of the flanks occurring synchronously with the systole of the heart can be observed. The pulsation, too, becomes less marked, and sometimes wholly disappears, when the patient is placed upon her hands and knees; and in this position also the murmur is less distinctly heard and is not so harsh in quality. Now, it has been found that this position exercises but little influence upon the signs presented by an aneurism, while, on the other hand, its influence is great in cases in which the pulsation of the aorta is communicated to the abdominal walls through the medium of an overlying tumor. The reason of this is plain. In the latter case, when the patient is placed in

the position above described, the tumor, unless bound down tightly upon the aorta, will fall away from it; but where aneurism really exists, no change of position can prevent the blood from flowing into the sac.

Can we have to do in this case with an enlarged liver pressing upon the aorta and transmitting the pulsation? I think not; for, although there is occasional dulness to the right of and below the ensiform cartilage, this seems to me to be due rather to the great tenseness of the rectus muscle than to the presence of a solid body possessing any magnitude. For the same and other reasons I exclude tumors of the pancreas and stomach from consideration. There are several diseases of the stomach, however, which may occur to you as furnishing many if not all of the symptoms present in the case, such as gastralgia, ulcer, and cancer, but it is, I think, exceedingly improbable that any one of these conditions is present,—certainly neither of the two latter. We have, it is true, pain in all these affections, but we do not necessarily have the aortic pulsation. We may have emaciation, but we also have in cancer and ulcer of the stomach nausea and vomiting of food, neither of which has been a prominent symptom, while hæmatemesis in any form has not occurred. The term gastralgia hardly indicates a specific disease; it means simply that the subject of it has severe and paroxysmal pains in the stomach, and in that sense the patient before us undoubtedly has gastralgia, and of a very severe type; but the word is generally used to describe those cases in which the pain is purely of nervous origin and is generally independent of any lesion which can be detected by the eye or the microscope. In this case I believe that there is a lesion, and therefore prefer not to use this designation.

It is not probable that the symptoms depend upon gastritis, although possibly inflammation of the stomach may have occasionally complicated the original disease. The pain has been too violent—has been too decidedly paroxysmal—to allow us to adopt this as the correct diagnosis. Gastritis, moreover, is accompanied by a certain amount of nausea and vomiting, and the pain to which it gives rise is distinctly increased by the ingestion of food. There is also no indication of dilatation of the stomach, and it is impossible that inflammation of this organ could have existed in this case since the first occurrence of the pain without giving rise to relaxation of its walls. Tenderness on pressure is also absent.

Caries of the vertebræ often gives rise to severe pain, which may or may not be paroxysmal, and which is sometimes referred to the epigastric region as well as to the back; but there is no tenderness over the spine in this case, no diminution of power in the lower extremities, and no affection of sensation. It is, therefore, not worth while to dwell upon this as a possible cause of the trouble.

Having already devoted much time to demonstrating that there is no sufficient reason for thinking the case before you to be one of abdominal aneurism, cancer, or ulcer of the stomach, gastralgia or gastritis, or that the symptoms are due to the pressure of a tumor upon the aorta, it now remains for me to tell you what I believe really does exist. As I said when I commenced this lecture, I have found the diagnosis one of more than ordinary difficulty; but the more I reflect upon all the features of the case and the more I compare them with those presented last year by a patient in the men's ward, the more I am forced to the conclusion that the real lesion here is enlargement of the lymphatic glands, some of which have been developed in such directions as to press upon the nerves of the stomach and intestines; and I will now adduce all the positive evidence I have at my command in favor of this view. In the first place, there is enlargement of some of the external

glands, and notably of those of the neck and of the groin; and I have thought, on more than one occasion, that I could feel through the abdominal walls the mesenteric glands enlarged. I do not speak positively on this latter point, for it is possible that I may have been deceived. Still, the enlargement of the inguinal glands in a patient of a scrofulous habit would indicate, to a certain extent, that there was similar affection of the glands within the abdominal cavity. Then many of the physical signs are explainable upon this supposition,—as, for instance, the pulsation in the epigastric region, the murmur, and the diminution of both of these when the patient is placed in certain positions. The absence of marked dulness on percussion is also corroborative of my view, for it is scarcely likely that the glands situated around the aorta would ever become sufficiently enlarged to affect sensibly the percussion note in the epigastric region. Disease of the abdominal glands gives rise to emaciation, which is present in a very marked degree in the case before you, and which is otherwise so difficult to explain.

The enlargement of the abdominal glands is probably to be attributed to a scrofulous habit; but the question might arise whether the patient has not had at some previous time during the course of her illness an inflammatory affection either of some one of the abdominal viscera, or of the peritoneum. We know so little of her previous history that it would be impossible to say that this was not the case, and it may be that the pain originally due to local peritonitis, situated in the region of the stomach and liver, is now kept up to a great extent by the existence of adhesions restraining the free action of some of the abdominal organs. This is a condition the existence or absence of which it is difficult to demonstrate in the living subject; but none of her symptoms directly point to it. I am certain, moreover, that at the present time there is no inflammatory complication, no matter how chronic, for her temperature has rarely been above 99.5° F., and there has been at no time any other indication of a febrile reaction, which would almost necessarily attend inflammation.

I need not tell you that I regard the prognosis as exceedingly unfavorable. If the patient really has *tabes mesenterica*, as I suspect, it will probably not be long before she succumbs to it; and if it should be proved that I am mistaken, I should not be inclined to hope for a more favorable termination. I have been unable to effect any permanent improvement in her condition, and I have seen her, in spite of the administration of tonics and of my efforts to increase her strength, grow weaker every day. The pain deprives her of sleep, and is now only relieved by very large doses of morphia.

It is not necessary to say much in regard to treatment. Cod-liver oil and iodide of potassium naturally suggest themselves as the proper remedies; but she cannot take the former without the production of nausea, and the use of the latter was suspended after having been given a fair trial. She is now taking tonics, which are varied from time to time. Morphia, sometimes administered by the mouth and sometimes hypodermically, has been the remedy principally relied upon to relieve the pain, and it has been necessary to give her large doses lately to effect this result. The spirits of chloroform, and occasionally hot alcoholic drinks, have been found to be useful adjuvants to the narcotic.

Note.—By the courtesy of Prof. J. A. Meigs, into whose care the case subsequently passed, I am permitted to refer to the appearances presented at the post-mortem examination. No disease of the heart and lungs was found, and also none of any of the abdominal viscera. The glands of the mesentery were almost universally enlarged: a large gland was found between the cardiac end of the stomach and the spleen, and another attached to the pylorus and to the duodenum by means of inflammatory adhesion. —J. H. H.

ORIGINAL COMMUNICATIONS.

OSTEOLOGICAL NOTES.

BY HARRISON ALLEN, M.D.,

Professor of Comparative Anatomy in the University of Pennsylvania.

No. II.

THE SENILE SKULL.

AS is well known, the term senility is altogether a relative one. It has no exact connection with age, but with that period alone when the greatest number of tissues have taken on the characteristic changes. "Diseases may anticipate the ravages of time, the young as to years becoming old as to structure."

I have arranged my notes upon the senile skull under the following heads:

1. Under the general tendency to atrophy, thin plates of bone, variously situated,—viz., at the superior (cerebral) and anterior walls of the middle ear, the orbital plate of the frontal bone, the os planum of the ethmoid, the lachrymal bone, the processes of bones tending to close the openings into the superior maxillary sinus,—may be destroyed in part. The three first-mentioned localities may be perforated, while the remainder may disappear. Thus, it is said, the antrum can be more readily probed from the nose in the aged than in the young adult.

2. The changes which take place in the sinuses from old age are of two kinds, contraction and expansion. The first of these is remarked in the maxillary sinus, and is chiefly due to the secondary effects upon the nutrition of the upper jaw by senile loss of teeth and absorption of the alveoli. The second is observed more particularly in the frontal and sphenoidal sinuses, which may become slightly enlarged in old age. Occasionally all the sinuses tend to enlargement. It would be a near approach to the truth to say that the sinuses do not remain quiescent in old age, but exhibit an inclination either to contract or expand.—(*Catlin.*)

The groove for the lateral sinus may be deepened. In one specimen the lateral sinus of the left side was open from beneath, and communicated with the corresponding inflated "pneumatic process."

3. The roof of the mouth becomes thinned and smooth. Perforations, more particularly in the horizontal processes of the palatal bone, are occasionally seen. The entire surface is either flat or convex downwards; in the latter case a median depression may be seen.

This form of change is often associated with marked deviation of the nasal septum. The posterior free edge of the hard palate is crescent-shaped, on either side of a spatuliform posterior palatal spine. The old tooth-pits are ordinarily obliterated, extraordinarily widened and flattened, or else, as is not rarely seen in the molar region, the line may be compressed laterally, making in this way a thin vertical process.

That portion corresponding to the intermaxillary bone is sharp and rostrum-like. When it is remembered that this, the incisorial region, is an extension from the vertex of the primordial skull, its persistence in senility, at a time when the lateral regions may have undergone atrophy, is interesting.

4. The lingual process of the sphenoid bone, which is pointed and unites with the Vidian canal in the young, and which is sharply acuminate in the young adult, becomes either rounded with a conspicuous depression on its under surface, or atrophied, when it may even disappear. Occasionally several minute irregular cells are contained in this process.

The base of the pterygoid process may rarely be inflated and occupied by minute irregular cells.

5. The pterygoid process is liable to a change in inclination. In the young and adult skulls the process is directed somewhat forwards. In the senile skull it is nearly straight, with its anterior aspect flattened. Owing to the absorption of the alveoli, the process often descends conspicuously below the level of the hard palate. The outer plate of this process is frequently widened and extended downward along the plane of the lower fibres of the external pterygoid muscles.

The result of my examination is at variance here with that quoted by Dr. R. G. Snow (*Canada Journal of Dental Science*, January, 1871, p. 67), who states that "at birth they [the pterygoid processes] look very obliquely forwards and downwards. In adult age they have taken the vertical position, and in old age they have again returned to their primitive oblique position."

6. The space between the foramen magnum and the mastoid process, instead of being roughened and furnished for the most part with an irregular knotted process ("pneumatic process"), which may be directed downwards, may be either inflated and rounded, or flat and inconspicuous. It is fragile, and consequently often found mutilated. The interior is occupied by large and irregular cells. Of eighty-four examinations, this point was noticeable in fifty-seven.

7. In addition to the liability of the nasal septum to deviate from the median line,—a tendency not peculiar to the senile condition,—we occasionally observe its cartilaginous portion undergoing ossification. This in some instances extends to the borders of the anterior nares.

8. Atrophy of the anterior portion of the greater wing of the sphenoid and the posterior border of the orbital process of the malar bone, where they unite to form the outer wall of the orbit, is one of the most marked features in the senile skull. The septum may become so thinned as to be translucent, or an actual loss of tissue takes place, in which instance it progresses, as a rule, from below upwards. In this way its lower half may be entirely absent. In eighty-four skulls, examined with reference to this point, the opening was evident in thirty-seven, and thinning apparent in fifteen: in none was the septum as thick as in adult life.

At the time the above note was taken—three years ago—I was not acquainted with Hyrtl's ("Topograph. Anatomie," vol. i. p. 20) mention of this tendency to atrophy in the outer wall of the orbit in the senile skull. So far as I remember, he is the only author who alludes to it.

I have said nothing as yet of the lower jaw, which presents in its angle such an admirable character to determine the position of the skull, whether it be young, adult, or senile. I have reserved its consideration until now, that an instructive point of comparison (as I believe it to be) may be instituted.

In a previous number of this journal I endeavored to prove that the entire side of the face, inclusive of the temporal fossa and the malar bone, is of masticatory significance, inasmuch as the muscles moving the lower jaw take their origin there. Now, if this be so, its parts should show something similar to that conspicuous change in the form of the lower jaw: there should be alterations in form in the temporal fossa and malar bone, in harmony with the influences operating in modifying the form of the lower jaw.

Bearing this in mind while examining the orbit of the young child, it is found that the cavity is bounded externally by the thick, vascular, external angular process,—by an equally massive and vascular orbital plate of the sphenoid,—while the corresponding plate of the malar also presents similar characters. In a word, all these parts are disproportionately developed. They never afterwards assume such a size or carry so many vessels. The early union of the parietal and sphenoid bones

causes a depression of the floor of the temporal fossa. This, however, is as yet shallow, and the processes above mentioned, while relatively thick, do not portend.

The upper, outer, and inferior margins of the anterior orifice of the orbit are sharply defined. A well-marked pocket exists in the superior and external angle. It is at this portion of the orbit and extending thence to its centre that a character may be found for the skull of adolescence and the early adult stage. Numbers of minute foramina are here seen, varying from a small, faint patch—the area enclosing them not being elevated above the orbital plate—up to a large space, which may cover the greater portion of the roof of the orbit, and form an abrupt excrescence therefrom. The openings may be minute, and more or less circular, or they may assume the form of irregular pits, of varying sizes. Commonly the outer portion of the roof of the orbit is involved, but the inner may alone present the peculiar appearance. These openings have no apparent connection with the formative frontal sinus. One hundred and sixteen examples of this vascularity were observed. Of this number, thirty were in skulls from subjects of about six years of age. A slight development of this feature may be seen retained in the majority of the skulls of the adult, but is rarely seen in the aged.

The malar bone in the young has not acquired the quadrangular shape of the adult condition, but remains of a more triangular form. Its upper margin, entering into the lower and outer angle of the orbit, is less depressed than in the adult or senile specimens.

From the above facts I would conclude that the obtuse angle of the edentulous lower jaw in the young subject agrees with the shallow temporal fossa,—the triangular malar bone showing that the chewing power is as yet undeveloped. The weakness of the same power accounts for the want of traction downwards and outwards of the outer and lower angle of the orbit,—as the activity of the lachrymal function explains the pocket-like depression at the upper and outer angle of the orbit.

This, however, does not account for the thickening of the sutural lines in the outer wall of the orbit. I believe this to be due to the operation of the law that membrane-bones are thickest along their lines of termination, and that these in the above examples are more than ordinarily active, from the fact that the internal maxillary artery is relatively large during the development of the teeth,—all the parts being supplied by branches of this artery.

While tumors of different kinds, but more particularly the exostoses, are more frequent at the inner angle of the eye than the outer in the child, we rarely, if ever, find non-specific inflammation unconnected with obstruction of the lachrymal sac at or near the inner canthus. The outer angle is, however, not so exempted. The spongy character of the bones here interested, conjoined with the activity of vascular supply in the young, causes the external and upper portion of the orbit, together with the malar bone itself, to be often the site of strumous abscess.

A CASE OF CHRONIC PLEURISY AND BRONCHORRHOEA.

CUMULATIVE ACTION OF DIGITALIS—RECOVERY.

BY H. C. WOOD, JR., M.D.,

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THE following case is one of considerable interest, although not as representing a rare disease. There are several points especially worthy of attention. The rapid effusion into the left pleura, and the subsequent

persistent profuse purulent expectoration, with coincident physical signs of consolidation of lung-tissue, when viewed together with the general failure of nutrition and the persistency of the symptoms, made a picture full of doubtful augury for the patient's future. By the microscope alone was I enabled to make a hopeful prognosis, as an examination of the sputa showed that the lung-tissue was not undergoing destructive ulceration, and that the matters expectorated were purely bronchial. As a therapeutic study, the case was to me one of more than common interest. It is the first instance in which I have seen a distinct so-called cumulative action from digitalis. The woman had been taking the drug very freely without obvious effect for a long time, and when I saw her on a Saturday her pulse was 100. The next day being Sunday I did not see her, and the resident took no note of her pulse. On Monday the pulse had fallen forty beats, and continued to fall, although the digitalis was at once suspended. I think a perusal of the notes taken will be a sufficient proof to any one that the digitalis does exert a cumulative action at times. This action is probably dependent upon the slowness of its elimination. Not being thrown off as fast as taken in, it gradually accumulates in the system, until a point of blood-saturation is reached sufficient to give rise to serious symptoms. A record was kept, during the period of depression, of the amount of urine passed, but it was unfortunately lost. It showed, however, that the digitalis did not in this instance exert any very marked diuretic action. Very probably it is in such cases that the cumulative action is especially liable to happen, as when the kidneys are excited by the drug they probably remove it as fast as it is taken into the blood.

Another therapeutic point to which I desire to direct attention is the apparently great benefit derived from the use of alum by the atomizer. It seemed to act most happily in checking the excessive bronchial secretion.

A. W., English, æt. 46, a widow, came into the wards of the Philadelphia Hospital, Feb. 16, complaining of very great pain all over the left side, rendered very intense by forced breathing. There was a rough friction-sound all over the left side, especially marked posteriorly, with some diminution of vocal resonance, but no dullness on percussion. The next day (February 17), at my visit, I found the patient suddenly free from pain, with the friction-sound very much lessened, but with marked percussion dullness all over the lower side, extending when she was lying on her back to within one inch of the nipple anteriorly. She was ordered a blister (6 by 8) to the side, and calomel, nitrate of potash, and tartar emetic. These powders were not given as freely as ordered, and no decided constitutional effects were induced. The effusion into the chest steadily increased, and by the 21st there was total percussion dullness in sitting position to about an inch above the nipple, with total loss of inspiratory murmur below the line, and just above marked prolonged, soft, tubular expiration and feeble inspiratory murmur, with some subcrepitant râles, and still higher up sonorous râles, which were also present all over the right lung. The effusion kept on increasing, and by the 24th had totally filled the pleura, with the usual physical signs, the only auscultatory murmur being soft tubular breathing, heard only in the supra-spinous and the subclavicular regions. The mercurial treatment had been continued but feebly. She was also blistered again. No change occurring, on the 28th she was ordered Basham's mixture in large doses. This had no effect in increasing the amount of the urine passed, which averaged less than 500 cc., the average before having been 500 cc. There was now free expectoration. The diet given was the best afforded by the hospital, but no alcoholic stimulants were allowed. Repeated blisters were applied to the left chest.

On March 4 the first distinct signs of improvement were noted. The pain was much less, she felt and slept better, and above the third rib there was clearness on percussion and a distinct vesicular murmur on auscultation. There was, how-

ever, constantly increasing expectoration, and by the 12th she was spitting about a pint daily of thick purulent sputum.

On the 15th the Basham's mixture was stopped. At this time the fifth rib formed the upper limit of percussion dullness on the left side; above was a nearly normal vesicular murmur. The right lung was full of fugitive sonorous râles. The pulse habitually 100. She was ordered narcotics and

Pulv. Scillæ,

Pulv. Digitalis, āā, gr. xii.

Ft. mas. in pil. xii div.

S.—One four times a day.

She went on without any marked change, and on March 17 the line of commencing percussion dullness was at the sixth rib, with the usual physical signs of water in the pleura below, and there were fugitive sonorous râles above the sixth rib in the left lung and all through the right lung. She was decidedly weaker, with a very troublesome cough and exceedingly abundant (more than a pint) viscid, gelatinous, purulent sputum.

On the 19th, the muriate of ammonia cough-mixture (ten grains four times a day) was ordered.

March 23, the note is: *Left lung,—posteriorly*, want of resonance over whole surface; *anteriorly*, fair percussion clearness to about two inches below the nipple, with rude vesicular murmur. Pulse, 84; respiration, 27. Sputa decidedly less in amount. Was up a little yesterday, and complains of more pain in the side, for which a blister is ordered. She has been taking four grains each of squill and digitalis daily up to this date, and this is now increased to six grains of each.

On March 25 the sputum had become more profuse again, and she complained more of pain in the left side. The physical signs were percussion dullness all over the left lung posteriorly, with a feeble vesicular murmur, heard very high up, passing in the central part into a faint tubular breathing, which yielded to total silence over the lower lobe. When she was lying down, a faint friction-sound all over the region below the nipple could be heard. The respirations were 28 a minute; the pulse 100. I did not see her the next day (27th), but on the following day found her with a pulse of 69,—a fall of forty beats,—and she complained greatly of dyspnoea. She had been taking the digitalis regularly up to this morning, when it was stopped. The next day, in spite of this, the pulse had fallen to 49. The beats were very full and strong; the intervals between them very long. When raised up, she instantly became weak and faint, and the pulse quickly ran up to 100. The shortness of breath was better,—possibly owing to the use of Hoffman's anodyne. She was very nervous, and the slightest excitement would cause the pulse to beat much faster and become very irregular, although not intermittent. Owing to this, it was found impossible to take a sphygmographic tracing. On attempting to do so, the pulse instantly would run up to 100, and become so broken and hobbling as to be really alarming. No nausea. Bowels constipated. In the evening, the pulse, taken by Dr. McCoy, was 102; but the patient had been coughing very much, which may have caused the rapidity of beats.

March 29.—“Pulse, early in the morning, 70–80; vibratory.” (Dr. McCoy.) When I saw her at 12 M., the pulse was 50, full and regular, with a peculiar vibratory thrill to the finger. Ordered f3iss whiskey every three hours.

March 30.—Pulse 54, very irregular, beating slowly and fully for a few beats, and then very rapidly for a half-dozen strokes; not intermittent, and without the thrill of yesterday. She is very much harassed with cough and exceedingly profuse sputum. The whiskey she gets regularly day and night, —f3iss every three hours.

April 1.—Pulse 87, regular. *Left lung,—posteriorly*, above the middle scapular region, the respiration, especially the expiratory sound, is rough and somewhat cooing. Below, total silence. Upper region, percussion note, absolute want of volume; high pitch. Below, pitch lower. *Laterally*, some percussion clearness found, with very faint murmur and an indistinct friction-râle. The vocal resonance has a much higher pitch on the left side, with greater distinctness than on the right side. Vocal fremitus totally absent. *Anteriorly*, percussion note good down to two inches below nipple. Respira-

tion somewhat rude; vesicular murmur lost about two inches below nipple. (This note is taken while she is lying on her back.) Line of percussion dulness alters with position. *Right lung*, nothing abnormal but exaggerated respiration. Cardiac sounds normal, except at the apex, where first sound is prolonged. Whiskey reduced to one-half the quantity. Sputa purulent, nummular, to-day. All treatment stopped but quinine, 8 grains; cod-liver oil; Lugol's solution, 20 drops t. d.; and compound iodine ointment to side. Morphia at night.

April 3.—Pulse, 92. No material change. Lugol to be increased one drop a day up to 30 drops t. d.

April 22.—Ordered six ounces of punch daily.

April 24.—*Left apex*, vesicular murmur rude,—very much so,—cooing in character, with marked prolonged expiration, and an occasional click in inspiration. *Right apex*, vesicular murmur somewhat softer. *Posteriorly*, vesicular murmur rude at right apex; same at left. Some friction-sound at left side. Percussion note very high-pitched at both apices anteriorly. Sputum now very profuse, somewhat nummular, purulent. On microscopical examination, no evidences of lung-tissue in sputa, which are made up of curious, small, irregular cells, containing each a smaller cell or a very prominent nucleus, and mucus- or pus-corpuscles.

May 8.—During the last two weeks the patient has taken gallic acid very largely, with, for a time, a very marked decrease in the amount of sputum expectorated, although at no time could the acid be chemically detected in the sputum. Latterly, however, the astringent appears to have lost its power, and the expectoration has become more profuse. The iodine has been taken internally and applied to the side regularly; and as the pleurisy, judging from physical signs and pain, appears to have been relieved, all treatment is ordered to be stopped, except the cod-liver oil and whiskey, morphia to command sleep, and the use of inhalations of solution of alum, gradually increased in strength.

Under this treatment she slowly improved, and the note taken May 18 reads, "*Left lung*.—On inspection, the side slightly sunken in. Nothing abnormal on auscultation, except that the vesicular murmur is very weak in lower lobe and rude at apex, and some old friction-râles can be heard in the side. Percussion note over the side and back not quite equal in resonance to that of the other lung. *Right lung*, apparently normal. The patient is gaining much in strength, and, though the character of sputum has not changed, the quantity has very much decreased and the cough is much less troublesome. The inhalations to be stopped."

From this time the patient was treated simply with cod-liver oil, tonics, laxatives, and morphia, as required, and a constantly decreasing amount of whiskey, which she had been taking in large quantities. She steadily gained in strength and flesh, and by the latter part of June her cough had entirely disappeared, and she was apparently well. She was kept in the hospital a month longer, and was finally discharged, as fat as a seal, and in the best of spirits and health.

EXCISION OF THE KNEE FOR DISEASE;

FIRM UNION; DEATH FROM INTERCURRENT BRONCHITIS SIX MONTHS AND A HALF AFTER THE OPERATION.

BY JOHN H. PACKARD, M.D.,

One of the Surgeons to the Episcopal Hospital.

WHATEVER may be the reason assigned for it, the fact cannot be denied that excision of diseased joints, and especially of the knee, has found less favor in this country than abroad. In the excellent memoir of Dr. Hodges, of Boston, published in 1861, there are tabulated 238 knee-operations, of which 167 were British or from British sources, 54 German, 4 French, 3 Swiss, and 10 American. In Mr. Price's monograph (1865), 293 British cases are mentioned, and only 6 (!) American. Swain (1866) gives tables of 156 additional British cases, making the whole number 449.

Under my own observation, six excisions of the knee have been done in this city within the past two years. Two of them were for deformity, and were attended with the best results; of the other four, one was the case which I am about to detail, and the remaining three will probably be published by the respective operators. I think they were all, like my own case, satisfactory so far as the local treatment and its effects were concerned. Believing that this procedure is one deserving of further trial at the hands of American surgeons, I submit the following account:

Francis K., æt. 12, was admitted into the Episcopal Hospital, July 20, 1869, with very large and obscurely-fluctuating swelling of the right knee. Three years ago he injured the knee in getting over a fence, and has been lame ever since. He could go about with a crutch or stick, however, except part of last winter; since May he has been unable to walk at all. This was all the history we could obtain of his case. He was a black-haired, blue-eyed, delicate-looking boy.

On the 18th of September, the swelling having become larger and more painful, I tapped the joint subcutaneously with a trocar; a large quantity of grumous pus escaped. Early in October I opened it again with a bistoury. The discharge of matter, both at the time and subsequently, was very profuse.

October 12.—Symptoms of hectic appeared, but were checked in a few days by quinine and full diet.

On the 21st I performed a resection, making a U-shaped incision, dissecting out the patella, and gouging out part of the sawn surface of the tibia. Thin slices only of the bones were removed. The joint was in a state of pulpy degeneration. Five or six ligatures were required. The wound was closed with lead-wire sutures, a carbolic-acid dressing applied, and the limb placed in a pasteboard trough. Wine-whey was given freely, and wine of ergot, f3ss t. d. He suffered no pain.

In a few days I substituted for the pasteboard trough a bracket-splint, so arranged as to allow of the dressings being changed without disturbing the limb.* He did very well, and grew fat and hearty.

November 26.—An immense discharge of thick yellow pus took place from the inner side of the joint. It soaked through the bed and formed a pool on the floor beneath.

December 6.—The front of the knee has assumed a very healthy appearance; the cicatrix is very firm. He had some diarrhoea, or rather a tendency to it, and was ordered quinine and opium in combination. His tongue was unnaturally red, and his pulse usually about 130.

December 22.—Union has evidently taken place between the bones. Discharge diminishing steadily.

February 6, 1870.—He has improved very much; pulse 96; no diarrhoea; very little swelling about the knee, and very little discharge.

February 16.—He is moving about the ward in a wheel-chair. A little more discharge; otherwise doing well.

March 28.—Some bagging of pus at the outer and back part of the knee. I made a counter-opening and introduced an oakum seton, which was removed in twenty-four hours.

April 10.—The limb is in excellent condition, the sinuses apparently closing. His constitutional symptoms are not so good. He looks blanched and thin. His tissues are soft; his pulse rapid. His stomach is irritable, and he has some diarrhoea.

After this there was not much change until April 28, when his parents took him home, about five miles from the city. Dr. A. C. Lambdin, of Germantown, kindly took charge of him then.

On the 6th of May he was sitting by an open window, when a change in the weather occurred, and he took cold. A severe attack of bronchitis ensued, of which he died, May 8. No *post-mortem* examination could be obtained.

I regret the imperfect character of these notes, which, however, set forth the main features of the case. The

* See American Journal of the Medical Sciences for April, 1870.

operation may certainly be called a successful one, since by it the boy's condition was greatly improved, and very firm union took place between the sawn ends of the femur and tibia. The cause of death was an intercurrent bronchitis, in no wise connected with the local trouble.

[Since the above was written, I have exsected another knee, for strumous synovitis, in a boy æt. 11, at the Episcopal Hospital. The case is so far (ten days) doing extremely well.—J. H. P.]

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

CLINIC OF PROF. AGNEW, SEPTEMBER 6, 1871.

Reported by Dr. Elliott Richardson.

CANCER OF BREAST.

THIS patient was a woman, æt. 35, who applied for surgical advice on account of an enlargement and induration of the right breast, which was the seat of a good deal of lancinating pain. She had first noticed this tumor in November, 1870.

Externally the skin presented no evidence of a diseased condition except a slight prominence in the upper portion of the breast. A digital examination revealed the presence of a tumor about as large as an orange, occupying the upper part of the gland. It was nodular, very hard, and heavy for its size. In the axilla of the same side a single enlarged lymphatic gland was found.

The woman was also suffering from a cough, had had hemorrhage from the lungs, and presented a more decided cachexia than could be accounted for by the existence of the tumor in the breast.

Prof. Agnew said that, from the unyielding nature, the nodular shape, and the great weight of this growth, he did not hesitate to diagnose scirrhus cancer. This somewhat common affection of the breast is considered by most pathologists of the present day to be the result of a constitutional disease which renders those who are the subjects of it liable to the production of tumors in many portions of the body, sometimes irrespective of local injury or irritation, but sometimes influenced by these causes as to point of selection.

It usually occurs between the ages of thirty-five and fifty, and in women shows a preference for the mammae and the uterus, probably on account of the menstrual disturbance, by which the latter directly and the former through sympathy are affected. These tumors are also frequently developed in the breast during lactation, another source of irritation applied to tissues presenting an extremely favorable seat for the development of abnormal growths, on account of the large amount of loose connective tissue therein contained. In this case lactation had not existed for the past three years. Prof. Agnew said he thought the affection of the lungs more likely to be of a tubercular than of a cancerous nature, not only from a history of ill health previous to the development of the tumor of the breast, but also from the fact that hæmoptysis due to carcinomatous disease of the lungs is an extremely rare occurrence; indeed, he could not recall a single case of such character, although he had seen expectoration streaked with blood. It must, moreover, not be forgotten that tuberculosis and cancer are never actively at work in the same person at the same time. They antagonize each other. The tubercular disease is generally kept in abeyance.

The lecturer thought no operative procedure advisable in this case, on account of the implication of the lymphatics of the axilla, a circumstance which would render an early reproduction of the disease at that point most probable.

The patient was directed to take iodide of arsenic in doses of one-twentieth of a grain three times a day for an extended period, with a view of arresting if possible the cancerous growth, while local applications of opium plaster were ordered to alleviate pain.

NECROSIS OF THE FEMUR.

A youth, æt. 19, apparently in possession of good general health, applied for treatment on account of trouble in the thigh. Situated on the inner aspect of the left thigh near the condyle was an opening, papular in character, surrounded by a discolored and depressed circle of skin, and discharging a purulent matter of offensive odor. The limb in this locality was somewhat but not greatly thickened. The affection had commenced about three years ago, but no history of local injury to the part could be obtained.

Prof. Agnew said the appearance of the opening and its surroundings was characteristic of fistula leading to dead bone, —whether of the nature of a sequestrum or of exfoliations could be determined by the probe. This instrument was then introduced, and carried down until it came in contact with living bone, then through an opening in this, when a sequestrum of dead bone was felt.

The lecturer said the disease had had its origin in periostitis, probably due in this case to severe muscular action, and the inflammation of the periosteum had resulted in the death of a portion of the shaft of the femur. The processes following the death of osseous structure are of a character analogous to those which follow gangrene of the soft parts. A line of demarkation is formed between the living and the dead portions, and granulations are thrown out which gradually surround and take the place of the necrosed bone. The latter now becomes a sequestrum, and, undergoing a slow process of disintegration, is discharged through an opening in the soft parts corresponding with one in the new bone. This process is tardy, and, if the sequestrum be large, may continue for years. When this is the case, an operation for its removal is advisable; but great care must be exercised in regard to a selection of the proper time for operation. There is much more danger to be apprehended from adopting this treatment too early than from delay, for if attempts are made to remove the dead fragment before it has become well detached or defined, the operator is obliged to cut away portions of living bone, which procedure is in many cases followed by further necrosis, and, consequently, a continuation of the trouble. On the other hand, if the inconvenience, either on account of pain, offensive discharge, or the uselessness of the member affected, be great, unnecessary delay should be avoided. The professor said that, in the case before him, the bone did not seem to be movable, but he thought that in about two or three weeks it would be perfectly safe to operate for its removal.

JEFFERSON MEDICAL COLLEGE.

SURGICAL CLINIC OF PROF. S. D. GROSS, SEPT. 13, 1871.

Reported by Ralph M. Townsend, M.D.

PURULENT OPHTHALMIA.

THIS patient, a baby boy aged two weeks, presents a typical example of purulent ophthalmia. An adhesion or sticking of his eyelids was noticed the second day after birth, and this condition has continued up to the present. Much matter is now being discharged, and, on the lids being separated, ulceration and opacity of the corneæ are found to exist. Many theories are brought forward to account for this condition, among which leucorrhœa in the mother stands prominent. When specific causes, such as gonorrhœa or syphilis, have to do with this affection, they frequently result in complete destruction of the eyes in a very few hours. The lids in this case are very much swollen; sometimes we find them so stiff from the effusion of plasma that it is almost impossible to separate them so as to bring the eyeballs into view.

Treatment.—The first thing demanded here is cleanliness. Use a good syringe to wash away the pus that otherwise accumulates and acts as an irritant; a sponge will not answer the purpose. This syringing with tepid water must be done at least a half-dozen times in the twenty-four hours: indeed, it can hardly be resorted to too frequently. The use of the tepid water should be followed by a solution consisting of the one-eighth of a grain of corrosive sublimate and two drachms

of lime-water to six drachms of distilled water. Such a solution acts at times almost as a specific.

This child was also ordered the one-fourth of a grain of quinine, in solution, three times daily; light was directed to be excluded from the eyes, and one drop of laudanum to be given at noon and bedtime, to keep the child quiet and to prevent its rolling its eyes in their sockets, and thus adding to the existing inflammation.

September 16.—This child returned to the clinic with an evident improvement in the left eye, but the sight of the right eye was irretrievably destroyed. The child nurses and sleeps well, and does not seem to suffer. The treatment was ordered to be continued.

EQUINO-VALGUS.

A little girl, aged eight years, came to the clinic from Norristown with an affection of her right leg and foot. The former is smaller than its companion, and is attenuated and flabby, although the thighs are of equal size. The foot is everted and the sole turned outwards, owing to contraction of the peroneal muscles. The heel is drawn up by the shortening of the tendo-Achillis, and there is an unnatural hollowness of the sole of the foot, due to the contraction of the plantar fascia. This condition is a result of paralysis which came on in the first year of this girl's life. Dentition is a common period at which paralysis, whether complete or incomplete, occurs, and it sometimes comes on in a few hours.

Treatment.—Chloroform was administered, and, when the child was fully under its influence, the tendo-Achillis was subcutaneously divided. Like division of the peroneus tendon and plantar fascia allowed the foot to regain its natural position and aspect. The punctures made by the tenotome were all protected by strips of adhesive plaster: they will probably unite in twelve hours. The strips should be removed at the end of the sixth day and the foot well washed: it should be regularly douched with hot and cold water, daily, for some time afterwards, and the leg well rubbed with stimulating liniments, flagellated, and shampooed. A proper shoe was adjusted to the foot immediately after the operation.

FRACTURE OF THE HEAD OF THE FIRST METACARPAL BONE, SIMULATING DISLOCATION OF THE FINGER.

Charles G., aged 9 years, came to the clinic with a painful affection of his hand. There was a marked swelling over the distal end of the first metacarpal bone, having the appearance of being caused by a dislocation on the dorsum of the hand of the first phalanx of the index-finger. Two physicians had so pronounced the nature of the injury, and had made unsuccessful efforts at reduction. The accident happened nearly two weeks back, and was caused by striking the hand against a fence and endeavoring to catch a base-ball simultaneously. On measurement, however, the index-finger was found to be as long, both in absolute length and in its relations to the neighboring fingers, as the index-finger on the opposite hand. This hardly comported with the idea of dislocation, for with two exceptions—*i.e.* the humerus in the axilla and the head of the femur in the thyroid foramen—there is shortening in all the dislocations of the body.

After carefully examining the parts, Prof. Gross pronounced the injury to consist in a fracture of the metacarpal bone, extending into the joint. The parts were directed to be wrapped in a strong solution of lead and opium, the hand kept in a sling, and the boy to report again at the end of a week.

EPULIS.

Maxie T., aged 7 years, has a tumor on the gum, which has existed for about three months. Last week he had a tooth extracted, which seemed to be intimately connected with the mass. This tumor is of a fibroid character, and undoubtedly commenced its growth in the socket of the tooth, which it loosened and pushed before it. The tumor was defined as an epulis, and is unusual at this period of life, the lecturer stating that he had never met with a growth of this kind at so early an age. Sometimes such a structure as this takes on epithelial action; at present it is the seat of a discharge of a disagreeable odor. A tumor of this kind may acquire sufficient bulk to interfere with mastication, deglutition, etc. It is liable to return, and the only remedy for its relief is excision of the piece of bone to which it is attached.

Chloroform was administered, and on taking firm hold of the growth it peeled off from the jaw like a piece of old moss from the bark of a tree. Two teeth that seemed implicated were drawn, and the jaw-bone, being soft, was thoroughly chiselled out, in place of a section being removed by means of the saw.

The especial care that must be taken with patients while under the influence of an anæsthetic during operations about the mouth was well shown in this case. The parts were very vascular, and repeatedly the patient had to be turned on his side and the head depressed, in order to evacuate the blood, which constantly ran into his windpipe and threatened to strangle him.

In connection with this case, Prof. Gross exhibited to the class two pathological specimens, removed in private practice during the morning. The first and larger one was a growth taken from the right forearm of an old lady seventy-two years of age. It had the appearance of a mushroom, and the skin on which it rested was greatly congested. It discharged a thin and offensive sanious fluid, but was the seat of no positive pain, if a slight twinge now and then might be excepted. It rested on a broad base, but, on removal, the subcutaneous fatty and cellular tissues, to all appearances, were found to be perfectly healthy. Section of it resembled section of the pancreas or mammary gland of a young subject. It occasionally bled, and was undoubtedly an epithelial outgrowth of the skin.

The second specimen resembled a large wart, and was taken from the lower lip of a man aged eighty years. Its base was greatly indurated, and it was defined as an epithelial cancer.

CYSTIC TUMORS SUPERADDED TO AN EPITHELIAL GROWTH UPON THE FACE.

Amelia P., aged 45 years, married, and the mother of several children, came to the clinic laboring under great deformity of the face, especially marked on the right side. The growth involved four-fifths of the nose, the whole of the cheek, and a portion of the forehead. At the apex of the tumor, corresponding to a point over the malar bone, there was a feeling of softness, as if caused by the presence of some fluid. The lower eyelid was wholly destroyed by ulceration, the upper one partly so, and the swelling was so great as totally to hide the eye. The anterior nares were expanded, and on looking in the tumor was seen encroaching upon the cavity of the nose. In the mouth everything appeared perfectly natural. This trouble came on three years ago, and commenced with an ulceration of the lower eyelid. Twice the affected portion was removed, but the onward advance of the disease was not checked by the interference. Eight months ago the growth commenced to implicate the nose, and now the left nostril is occluded, and there is a watery discharge from the right. The patient lives in New Jersey (a State remarkable for furnishing the College clinic with a number of growths of this and similar kind), and, although she is thin and pale, says she sleeps and eats well, and has not much pain. The lecturer stated that he recognized an ordinary epithelial disease in that portion of the growth affecting the upper part of the cheek and eyelids, but that there was evidently superadded to this epithelial growth a tumor of another character, whose precise nature at present he had not determined. Its external features resemble those of encephaloid. It also evidently contains cysts, for an exploring-needle, introduced into one of the soft portions of the tumor, furnished a glutinous or jelly-like fluid, of a yellowish color, which exuded in considerable abundance. Introduced at another point, the needle furnished a discharge more pus-like in its character. The fact that this tumor has not encroached upon the mouth would seem to indicate that the antrum as yet remains unaffected.

An operation at the present time would be out of the question. There would necessarily be a great deal of shock and hemorrhage, and probably pyæmia or erysipelas would supervene.

Tonics, attention to the bowels and secretions, and the avoidance of stimulating meats, as having a tendency to make the tumor grow, are about all that are here indicated.

The patient was ordered a dessert-spoonful of the elixir of calisaya bark in combination with five drops of Fowler's solution of arsenic three times daily.

CORRESPONDENCE.

ON A SPEEDY CURE OF GONORRHOEA.

TO THE EDITORS OF THE PHILADELPHIA MEDICAL TIMES.

IN the *Lancet* for May 13, 1871, there is a communication from Dr. Foster, of Leeds, on the "Speedy Cure of Gonorrhœa by Local Treatment only." He expresses great surprise that a complaint like gonorrhœa, owing its origin to a purely local cause, and usually unattended with any constitutional disturbance, should ever be treated by any other than local remedies.

His ideas seem to me so correct, and his views are so much in unison with my own experience, that I have ventured to ask leave to give expression to my notions in the *Times*. I think it cannot be too deeply impressed on the minds of medical men that the practice of dosing the unfortunate victim of the complaint with copaiba, cubebs, and various other remedies (whose name is legion), with a strong probability and, indeed, almost certainty of deranging his stomach and digestive organs, to say nothing of the nauseous character of the drugs, is useless and unwise in the extreme. An ordinary uncomplicated gonorrhœa is as purely a local disease as a common "cold in the head" or inflammation of any other mucous membrane. Its natural tendency is to recovery, even without treatment; and if any be pursued, it should be of the mildest character, such as weak injections of acetate of lead or sulphate of zinc, never exceeding two or three grains to the ounce of water. I prefer rose-water to the ordinary distilled water, as it is in itself slightly astringent. This or some other injection equally simple, for which the doctor has a fancy (and we all have our pet remedies), assisted by a cold sitz-bath morning and evening, or, if that be impracticable, by affusions of cold water, will generally effect a cure in a short time, without the risk of upsetting the stomach, destroying the appetite, and, what to some men is worst of all, the liability of detection and exposure to their friends or acquaintances.

Such are the views which have governed me for many years in the treatment of this affection, and I have not yet seen any good reason to depart from them. Of course, any complication that may supervene, such as swollen testicle, or inflammation of the bladder or prostate gland, requires remedies suitable for such conditions; but a simple clap is always amenable to mild measures.

THOMAS F. BETTON.

GERMANTOWN, August 29, 1871.

ON VASCULAR MURMURS WITHIN THE LUNGS.

MESSRS. EDITORS:—In a clinical lecture of mine which you published in the number for April 15, I analyzed a case of vascular murmur heard in the neighborhood of the right mamma, and arrived at certain conclusions which I believed legitimate. At the time I was not acquainted with any similar case, and therefore felt the less confidence in the results of my analysis. Quite recently I met with an abstract of several more or less analogous instances in the *Prager Vierteljahrschrift*, 1870, Bd. iv., *Analect.*, S. 30, which naturally renewed my interest in the subject. Supposing that

some others of your readers may be pleased to see the article, I subjoin a translation of it, and remain

Yours very sincerely,

ALFRED STILLÉ.

1500 WALNUT STREET, October 3, 1871.

"Bartels treats of cardiac systolic murmurs heard in the lungs (*Deutsch. Archiv f. klin. Med.*, 1869, pp. 111-125), and Immermann describes a case of cirrhosis of the lung, with consequent narrowing of both pulmonary arterial trunks and of their primary branches, in which a systolic murmur could be detected in front of the heart and above it, and also in the back. Bartels observed seven analogous cases. One of them resembled that of Immermann; in five other cases there was a partial induration of the lung-tissue by chronic pneumonia. . . . In the seventh case, the murmur existed over one lung that had long been compressed by a pleuritic effusion, but which had discharged through a fistulous opening. The effusion, however, accumulated anew, and as it did so the murmur grew weaker, but became louder again on the evacuation of the fluid. Bartels supposes the murmur to have been generated in this case by the pressure of the indurated upper lobe of the right lung upon a branch of the pulmonary artery, and that the murmur disappeared when the effusion was excessive, but returned when this had partially subsided. He also judged that it could not have arisen in the main trunk of the pulmonary artery, because it was audible only above the third rib. In the remaining five cases, he was of opinion that the murmur originated in a dilatation of the arterial branches, as a similar one is heard in certain cases of vascular goitre. The vascular channel, he supposed, was rapidly contracted by the obstruction of a considerable area of lung-tissue, the mass of the blood not being at the same time proportionately diminished, wherefore the pressure of the blood was increased within the narrowed vessels, which consequently underwent dilatation. Under these circumstances, the murmur became intensified during inspiration, for by that act the current of the blood was quickened and its pressure augmented."

ON FREEZING BEEF-ESSENCE.

TO THE EDITORS OF THE PHILADELPHIA MEDICAL TIMES.

THE difficulty of inducing some patients, especially children, to take food when the throat is inflamed from any cause, is at times a very serious one; and I therefore beg leave to present to your readers a remedy which was of the greatest service in a case which came under my observation some time since.

A child was seriously ill with scarlet fever, and, owing to the condition of his throat, it was almost impossible to induce him even to attempt to swallow the beef-tea which his condition imperatively demanded, although he took ice with avidity. He was evidently sinking, when his father suggested that beef-tea made according to Liebig's formula might be readily frozen into a sort of water-ice. This suggestion was immediately carried out, and without trouble, a confectioner freezing the beef-tea, a pint at a time, into a firm mass. Portions of this the child took readily, finally recovering,—a result due in great measure to his father's ingenious device.

It is of course necessary to keep the frozen mass surrounded with the freezing mixture, but with this precaution it may be kept for a great length of time.

It seems to me that this idea is capable of sufficiently wide application to make it of interest to many members of the profession.

I am, sir,

Very truly yours,

HORACE BINNEY HARE.

229 SOUTH SIXTH STREET, September 23, 1871.

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EDITORIAL.

LACTIC ACID AND ACIDULATED PEPSIN
 IN CROUP AND DIPHTHERIA.

DR. WILLIAM H. DOUGHTY, in a valuable article in the *Richmond and Louisville Medical Journal* for August, 1871, discusses this subject, alluding to a former paper of his own which we recollect reading in the same journal for December, 1868, and which impressed us favorably. In the treatment of the case there reported, he was led, by reflections upon the physiology of digestion, to devise an artificial gastric juice as a substance rationally adapted to dissolve the membrane.

Later, his attention was directed to the experiments of Bricheteau and Adrien on the "Solubility of False Membranes" in lactic acid and other agents, published for the first time in this country in the *American Journal of the Medical Sciences* for October, 1868.

Again, the experience of Weber, of Darmstadt, published in the *Medical News and Library* for April, 1870, from the *Medical Times and Gazette* of January 22, 1870, further attracted his attention. The latter used lactic acid first only after the operation of tracheotomy, partly with a view to keeping the tube clean, but partly, also, hoping that it might affect the membrane extending down into the bronchi. The results were so favorable that he was induced to try it in severe cases of croup before having recourse to tracheotomy. "*Since then he has not once had occasion to operate, and has not lost a single case of croup.*"

We concur in the surprise entertained by Dr. Doughty that this method has not more generally attracted the attention of American physicians, or at least that the results of their experience have not been more generally published. The experiments of Bricheteau and Adrien, and the experience of Weber, have shown an undoubted rapidly solvent action of lactic acid on false membrane, while Dr. Doughty's experiments and experience have shown a similar though less rapid action by an artificial gastric juice made of Boudault's pepsin, ʒij, dilute muriatic acid, gtt. v, and distilled water, fʒij, filtered. According to Weber, the patient was made to inhale a solution of lactic acid, fifteen to twenty drops in half an ounce of water, first every half-hour, and afterwards, when the respiration improved, a solution of ten to fifteen drops in half an ounce of water, *measures being*

also taken to protect the face and eyes. These substances produce this solvent action in not less than seven hours' continuous use, and, since such use is impossible, not less than twenty-four hours' intermittent use is necessitated. Even then it does not follow that the fibrinous substance will be regularly discharged by expectoration, or that by the time the inhalation ceases the air-passages will be thoroughly cleared of the obstructing mass. In the case last reported by Dr. Doughty, the pepsin solution had been used twenty-seven hours intermittently (equivalent to about seven hours continuously), and very little expectoration had taken place, when the air-passages were suddenly flooded with warm vapor, so as to promote expectoration, and "the digested, pulpified morbid product was brought away in great quantities, to the sensible relief of the burdened organs and the danger of the case." The patient, a child nine years old, recovered.

In the *London Practitioner* for September, a case of croup treated by lactic-acid inhalations is reported by Dr. N. L. Butler. A mixture containing two-thirds water and one-third lactic acid was applied every third hour, each application being continued not more than two minutes, instead of using only two or three lengthened applications in twenty-four hours, as practised by Dr. Barthez. A mercurial treatment which was instituted on the day previous to that on which the inhalation was first employed was, however, continued during the use of the acid; and, although the child began to improve immediately, and the improvement continued until her ultimate recovery, the case can hardly be considered admissible in evidence.

We have thus given prominence to this subject, because, as intimated, we feel that the plan of treatment has not sufficiently claimed the attention of American physicians, and we desire to urge its trial. Certainly, if the observations of the writers abroad and in this country are to be relied upon, it affords the most hopeful plan of treatment to which attention has been called. We are aware that in this city the treatment has been attempted, and that with apparent want of success; but we doubt whether the time and care referred to as necessary have been given. It should be used early in the attack.

LEADING ARTICLES.

MEDICAL EDUCATION ABROAD.

II.

IN the last number we presented a brief sketch of the system of medical education as it at present exists in the three great capitals of Continental Europe. We pointed out as the distinctive features of this system—for it is in all important respects the same in Vienna, Berlin, and Paris—the strong governmental protection which the schools receive, the intimate connection between didactic and clinical teaching, the large number of special courses of lectures delivered by non-

official teachers, and, finally, the possession of more or less elaborate accessory institutions, such as pathological and physiological laboratories.

We have purposely given the first place to the constant and powerful support and protection which are afforded to the medical schools by the governments of their respective countries, because these are, in our opinion, almost indispensable prerequisites for their success. The schools are thus enabled to exact from the student a prolonged course of study, and to maintain at a very high point the standard of acquirements necessary for obtaining a degree. We confess that we are far from sanguine as to the possibility of attaining these results in a democratic country, where no supervision is exercised by the government over professional education. It is apparently impossible to educate the public mind to an appreciation of the value and necessity to the practising physician of a thorough education, and it too often happens that we find persons of good general intelligence reposing implicit trust in physicians whose only claim to confidence lies in their tact, amiability, or pleasing address. It must always be a most difficult task, therefore, for any school or combination of schools in America to elevate materially the standard of medical education, since with each advance in the acquirements demanded of the applicant for a degree, there will be a rival school starting into existence and entering into dishonorable competition by offering to confer its diploma upon easier terms. It is indeed the need of a wise and judicious protection which might prevent such degrading rivalry, that is even more strongly felt in this country than the mere want of pecuniary support so liberally furnished by governments abroad to their medical schools. In its absence, the utmost that can be accomplished at present is to complete the development of our educational system to the highest point, so that we may be able to offer freely every opportunity to the student, and to endeavor to persuade him to profit thereby, since it is impossible to compel him to take advantage of the facilities presented.

As, however, this effort is comparatively a recent one in America, and we are still far from being able to offer facilities for study equal in quality and variety to those found in the great cities of Europe, the question naturally arises as to how far it may be desirable for American students of medicine to go abroad for the purpose of pursuing their professional studies. This question presents itself to us very frequently, and is far more difficult to answer than it was fifty years ago, when the rule was absolute that all who could possibly afford the expenditure of time and money should complete their medical studies during a residence of two or three years at some of the great European schools. It is of course apparent that the greater diffusion and interchange of medical knowledge effected during the few last decades have done much to equalize merely didactic teaching the world over, so that it is no longer necessary to be actually present in the body to sit at the feet of any great teacher; and, indeed, we firmly believe that, so far as concerns purely didactic teaching, es-

pecially of the applied or practical branches of medical science, the chief schools of America may boldly challenge competition with those of any other country. When, then, we bear in mind that the official courses of didactic instruction constitute a large proportion of the preparation necessary to obtain a degree abroad, and that a number of years must be spent in securing it, we have no hesitation in expressing our opinion that it is no longer desirable for American students of medicine, not intending to reside and practise in foreign cities, to obtain a diploma from any of the European schools. There is another consideration of importance which may be added to confirm this opinion. There is much variety in the diseases of different countries, in part owing to peculiarities in the constitutions of the inhabitants, in part to atmospheric and climatic conditions, in part to the fact that some affections are prevalent and assume a severe type in one country which are mild and of rare occurrence in others. Not only so, but, partly from this latter cause, partly also from diversity of theoretical views, the modes of treatment recommended at different schools vary considerably. It is manifestly disadvantageous for a student to spend from four to six years in becoming thoroughly familiar with certain forms of disease and types of constitution which differ more or less markedly from those he will be called upon to treat in his own practice, and for him to gain experience with certain modes of treatment which will prove more or less inapplicable to the diseases of his native land.

We must, finally, allude briefly to another consideration, of a social and moral rather than of a medical character. Without referring to the numerous seductive forms of vice which render life in Vienna, Paris, and Berlin so dangerous to young men, we cannot doubt the injurious influence of a prolonged residence in those cities at the time of life when habits are most readily formed. It must frequently happen that long familiarity with modes of life and social customs so widely differing from those in America will, to a certain extent, unfit a man for pursuing a profession happily and successfully after his return to this country.

But, if we would most unhesitatingly dissuade any student from going abroad with the intention of studying four or five years and obtaining a diploma from one of the European schools, the case is far different with regard to a shorter visit there, made after graduation, with a view to obtaining more complete knowledge of some special branch of medical science. We have already called attention to the fact that the superiority of these schools depends chiefly upon the very great advantages they offer for the study of specialties. Indeed, to so great an extent has the system of multiplying special courses of instruction been carried in some schools, that we fear that, although it may lead to the acquisition of a minute and precise acquaintance with limited portions of medical science, it must also conduce to the exclusion of that broad and comprehensive, though less scientifically exact, grasp of the whole field, which is of such vast importance as a foundation for practical skill. To any

one, however, who has been thoroughly instructed in all the didactic branches, as well as in general clinical medicine and surgery, the opportunity of pursuing for a short time some special branch of practice is attended with unmixed good. The mode of delivering these special courses of instruction which is followed abroad is most admirably adapted to the convenience of the student. The course usually extends over but a limited period, say six or eight weeks, and the number of students is also so limited that each one is able to secure the full advantages of personal instruction. No sooner has one such course been concluded than a similar one is commenced with a second class, and the student can therefore take several courses under the same teacher within a period of a few months, or, by passing from one city to another, can, during a single session, secure instruction upon any specialty from the most distinguished teachers in Vienna, Berlin, and Paris. It must not be forgotten also that, at the same time, much valuable information, other than of a purely medical character, is gained. To any man filling so important and prominent a position in society as every successful physician must do, knowledge of the world, and of the language, manners, and modes of living of the principal nations, and that culture a taste for which is so strongly inspired by travel, by observing the triumphs of art, and by intercourse with men of high and varied attainments, are of the greatest importance. So that the opportunity for acquiring these latter advantages must be classed among the strong inducements which lead young medical men to spend a short time in Europe. We should unhesitatingly, therefore, advise all who, after obtaining a degree in America by three years' faithful study and after fully availing themselves of the clinical facilities here afforded, find themselves in a position to travel, to spend a year, or even six months, on the Continent, in the study of whatever special branch of their profession they most strongly incline to. They may rest assured that they will never regret having done so, but that, like all expenditures of time and labor judiciously made in preparing for the work of life, the investment will quickly yield such large returns as to more than repay itself. There are, however, we well know, but a very limited number of our young medical men who can avail themselves of such advice, and the vast majority of our students must look within the limits of American cities for all the advantages they can ever hope to enjoy. This simple fact clearly indicates the duty of the teachers in our own great medical schools. Let them press forward the work of organizing and developing their systems of instruction, increasing their educational facilities, obtaining the most ample clinical basis for their practical courses, and affording full opportunities for the thorough study of every important special branch, whether of science or of practice. Let them be unwearied in their efforts to elevate the tone of public sentiment upon the subject of medical education, and to awaken and enlist the active interest of wealthy, public-spirited men and women in the support and extension of our medical institutions, so that ultimately, by the disinterested gen-

erosity of private individuals, America may be able to boast of as complete and efficient a system of medical education as even imperial bounty has succeeded in establishing abroad. Thus and thus only can our representative men discharge the debt they owe to medical science, medical education, and the future medical men of America. Thus and thus only, but surely thus, can they advance the growth of a truly national medical school, not limited to any one centre, but with a representative branch in every great city of our land, and which shall extend to all who seek its instructions as complete, enlightened, and advanced a system of education as the age affords.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY, SEPTEMBER 14, 1871.

THE PRESIDENT, DR. JOHN ASHHURST, JR., in the chair.

DR. ELLIOTT RICHARDSON presented a specimen of *syphilitic necrosis of the skull*, and said that the patient from whose body it was removed was a native of Philadelphia, aged 47 years, a sailor, and, according to his own statement, a man of temperate habits.

He was admitted to the venereal wards of the Philadelphia Hospital, August 13, 1868, and remained there until his death, which occurred on the 9th of the following September. He had been under treatment at the Pennsylvania Hospital from January 11, 1868, to the day of his admission to the Philadelphia Hospital.

The notes which were taken of the case were not preserved, and the doctor was only able to state from recollection the patient's condition at the time of his admission to the wards of the last-named institution. At that time he was extremely emaciated, and was suffering from fully-developed hectic fever. His scalp was elevated at nearly all points by accumulations of pus beneath, and through openings in some of these, dead bone in large masses could be felt. The patient said that several fragments of bone had from time to time been removed. Dr. R. thought that there were rupial ulcers in various parts of the body, but he did not recollect that any evidences of necrosis of other bones than those of the skull existed. He was not afforded an opportunity to make a post-mortem examination, but was able, with the assistance of his colleague, Dr. Beecher, to secure this specimen of the skull.

On examination, it appeared that scarcely a single bone of the skull had escaped alteration. The frontal, the parietal, and the occipital bones had been nearly all destroyed, leaving a space extending, in the median line, from the occipital protuberance to within about an inch of the orbital arch of the frontal bone, and varying in width from one and a half inches at the anterior portion of the parietal to three inches at the frontal, and about five inches in the region of the lambdoidal suture, entirely void of any osseous structure. At the time the post-mortem was made, the occipital portion of this space was occupied by a delicate network of bone, consisting principally of the external and internal tables, and supporting in its meshes two fragments of a diseased osseous structure, of a dull sage color and irregular outline, one fragment measuring about one and a half inches by one and a quarter inches, the other about two and a half inches by two inches. These fragments were much heavier than any normal osseous structure; they seemed to have been the result of a change in the diploic portion of the cranial bones, for the tables were seen extending over them for a short distance, and had apparently at one time completely covered them, but have gradually ulcerated away, either before or after the death of these diseased pro-

ductions. Notwithstanding the most careful handling, this network was broken down subsequently. Fragments of a similar nature were seen still imbedded in the remaining portions of the frontal, parietal, and occipital bones. The temporal bones appeared to have undergone less change than any other portion of the cranium. Of the bones of the face, the left turbinated bone and the vomer were nearly destroyed. The left superior maxillary, the left nasal, and the left malar bones, and the left greater wing of the sphenoid, the right turbinate, the lachrymal, and the ethmoid bones, were extensively diseased. The right malar, the right nasal, the right superior maxillary, both palates, and the inferior maxillary were least affected.

A considerable portion of the floor of the left orbit and the left superior alveolar process have been destroyed.

Dr. H. ALLEN said the specimen was interesting—first, from the extent of loss of structure of the vault of the cranium,—a fact which confirmed an observation of his own, that the base of the skull is not affected when the vault is: all that part of the skull developed from cartilage being free from disease, while that developed from membrane is affected. Second, that the upper portion of the greater wings of the sphenoid bone is extensively involved; he had often noticed this. Third, that the roof of the orbit to the outer side and the external angular process of the frontal bone are affected in like manner.

Dr. W. PENN BUCK presented for Dr. F. F. MAURY a tumor of the clitoris, removed from a woman aged 28; also a photograph of the tumor *in situ*. The tumor had been growing for three years. At the end of the first year it was the size of a hen's egg, after which it remained stationary for nine months, when it again rapidly grew until it attained its present size, about three inches in diameter, and necessitating its removal. It was covered by an integument like that of the scrotum.

Dr. H. ALLEN presented the specimens from a case of abscess of the anterior mediastinum. (A full account of this case will appear in the next number of the *Times*.)

REVIEWS AND BOOK NOTICES.

ODD HOURS OF A PHYSICIAN. By JOHN DARBY. 16mo, pp. 256. Philadelphia, J. B. Lippincott & Co., 1871.

What man is there who cannot own to moments of solitude in which his soul slips the leash of its body and courses at large into the illimitable ether? Now, perchance, it strives to interpret the sigh of the wind, or the unrest of the sea: anon it strains to pierce the mystery of life,—that riddle of the Sphinx. Now it yearns after some vague tabernacle, not of flesh, and yet substantial, palpable, and yet ethereal; and now, shrinking from this foretaste of immortality, and ill at ease, because disembodied before its time,—and, therefore, adrift, and not the self it one day shall be,—it hastens back to its "mortal coil." Such are the fancies and contradictions of our day-dreams; and who has not thus filled up the voids of his material life?

Of such a cast are the "Odd Hours" of John Darby; and in this practical world, where few care to acknowledge the Bohemian leaven of their nature, it is truly refreshing to find one man plucky enough to unbosom his inmost thoughts and divulge his varying moods. The glowing coal of an "office grate" is the familiar which has inspired these reveries; and to it we return our thanks.

No method marks the range of thought embodied in these essays, but the vagrant mind of the author has put up and unpacked at any chance hospitable whim. Although often prying into the outlying regions of the unknown, his are not the pert formulæ of the metaphysical mountebank, who treads the tight-rope of our mental horizon and startles us by the audacity of his pranks; nor yet the imperious affirmations of the austere thinker; but the calm musings of an introspective mind,—the quaint thoughts of a Quaker philosopher, and, indeed, quite as quaintly costumed.

That the author has always reached his goal—the truth—cannot be affirmed; for, in studying the book of Nature,—that "*volumen operum Dei, et tanquam altera Scriptura*," as

Bacon so happily calls it,—one is far from understanding all one reads. Some truths are prehensible and available; others hover at a distance, dim in outline; while many—too many, alas!—are lost in the haze of our ignorance, unseen and even unsuspected.

The chapters on "Success," "Spending," "Law," and "Principles," are ingenious and original. That on "Living" gives much sound advice. In "The Philosopher's Stone" the author cries "Eureka!" over the discovery of this life-truth, that "The common experience is the true experience." "Wise and Otherwise" is an olla-podrida of apothegms and erudite quotation. "To-Day," one of the best chapters in the book, shows up the vagaries of scientists. In it, by one of his pointed "Queries," he neatly spits the materialism of Maudsley, and proves that Cabanis has anticipated him by a century at least. Of all mental arms of precision, the Socratic method of argument is his favorite and most effective weapon; and yet he relies mainly on earnest persuasion and apposite illustration. "Utopia" describes the yearnings of an unsatisfied soul: can it be, O John Darby! that "*mutato nomine de te fabula narratur*"? "In the Country," a chapter sui generis for style and sentiment, brings to a close this series of essays. Thus it appears from this brief analysis that he deals not only with the practical questions of life, but also with those of vast outlook; questions which involve the very basis and essence of mind; questions on which we want light, more light, most light.

To those of our readers who find the time to dream day-dreams, we say, "Buy this book; for it will give you much pleasure as well as profit." To the author—whose *nom de guerre* cannot disguise from us a well-known surgeon of this city—we tender our hearty thanks for many charming hours spent over these genial and healthful essays.

ON SOME DISORDERS OF THE NERVOUS SYSTEM IN CHILDHOOD: being the Lumleian Lectures delivered at the Royal College of Physicians of London in March, 1871, by CHARLES WEST, M.D., Fellow and Senior Censor of the College; Physician to the Hospital for Sick Children. 12mo, pp. 128. Henry C. Lea, Philadelphia, 1871.

This little book contains three lectures, in which the author considers the subjects of neuralgia and epilepsy, chorea and paralysis, disorder and loss of power of speech, and mental and moral peculiarities and their derangements.

As these lectures were written for delivery before the Fellows of the College, they are not intended to be exhaustive monographs on each particular subject; but they fill up a hiatus, point out every-day errors in diagnosis, and enable those who do not see so much of children as Dr. West has seen to take advantage of the *little things*, the premonitory symptoms of the diseases of which he treats. The doctor has evidently in his heart a great love for his little patients, and this love has guided and intensified his powers of observation.

The first lecture is opened with a slight notice of Dr. Richard Caldwell and John, Lord Lumley, the founders of these Lectures in 1572. He mentions that from this chair William Harvey first publicly taught his doctrine of the circulation of the blood.

Dr. West defines neuralgia in the adult as "*pain independent of local disease*," the cause of which may be known or unknown, but the disease consists simply of the symptom, pain, with perhaps an altered condition of the circulating fluid. He then states, and proceeds to prove his statement, that "*in infancy and childhood, however, pain referred to any part signifies, almost without exception, that disease of some sort or other is going on there or near at hand*." When there is paroxysmal pain in the head, even if it seem to be controlled by quinia, he warns us to be prepared for organic disease of the brain. He, however, admits the existence of one form of true neuralgic headache developed in school-children, and which may exist in later years in the same individuals as hysterical sick-headache.

Without quoting too largely from the book, we can give no just idea of the author's teaching of the meaning of convulsions,—including those induced by intestinal disorders, and those which are the consequence of *advanced* organic disease of the nervous centres, but which are never, as he remarks, the initiatory symptoms.

He next shows the obscure beginnings of the epilepsy of children, and the difficulty of recognizing *le petit mal*, and argues that the greater proportion of cases of epilepsy in children originally depend upon eccentric causes which might have been removed. In his remarks on treatment, he considers bromide of potassium the most reliable curative agent. He states that he uses the remedy empirically, as it benefits some cases and has no effect upon others; and "he has found no means by which to distinguish beforehand the cases where the bromide will do permanent good." He makes no mention of the use of the ophthalmoscope to ascertain the condition of the retinal vessels, or whether the bromide was most efficient where there was habitual congestion.

In treating of chorea, the causes are first considered, and the effect of sex, rheumatic diathesis, etc., as predisposing influences. He includes the history of some interesting cases with heart-complications, and depends in his treatment mainly on the sulphate of zinc and tartar emetic.

The lecture on paralysis includes the forms following diphtheria, and those consequent on long illness, rickets, idiocy, cerebral tubercle; it includes also the characters of infantile paralysis.

The third and last lecture treats of speech, its tardy development in some cases, the causes of stammering, and the loss of speech after severe illness. He finishes the lecture with remarks on cases of mental and moral peculiarities of children, their effect on disease, and treatment.

In style the book is terse and clear, full of new ideas, and is a spur to new trains of thought. It will be a source of pleasure and profit to any physician whose practice brings him into contact with children.

ARTIFICIAL INDUCTION OF LABOR IN URÆMIA. By SAMUEL G. BUSEY, M.D., Physician to the Louise Home, one of the Physicians to the Children's Hospital, D.C., and Physician in Charge of Diseases of Children at the Columbian Dispensary. Read before the Clinico-Pathological Society of Washington, October 24, 1870. Reprinted from the *National Medical Journal*. Pamphlet, 8vo, pp. 62.

This very interesting paper has for its text the query, "Is the induction of premature labor as a remedy for and a method of prevention of uræmic eclampsia a practicable and a justifiable procedure?" It is an elaborate exposition of the views of the medical profession at the present time on the subject of eclampsia, its causes, consequences, and treatment.

The author, excluding such conditions as hysteria, considers the universal cause of eclamptic convulsions to be want of action of the kidneys, consequent on pressure, congestion, or other cause, the symptoms of the pathological condition of the kidney being albuminuria, anasarca, and convulsions; the latter the direct effect of either uræmia or anæmia.

To establish the truth of this theory, he quotes passages from many of our acknowledged authorities,—from Bright, who first directed attention to the relation between disease of the kidney and albuminuria, down to the latest publications bearing on the subject, including the histories of numerous cases, giving the subsequent experiences of recoveries and the results of post-mortem examination of those who died.

The greatest objection to this theory—the alleged ephemeral existence of the albuminuria of pregnancy—he meets by nine propositions. We quote the second of these: "In its incipient and primary stage, Bright's disease is self-limiting, terminating by resolution upon removal of the cause." This proposition serves also as a strong argument in favor of the proposed treatment,—the induction of premature labor; and he lays stress upon the fact that the proper treatment for the post-parturient condition is also proper for the disease of the kidneys,—viz., rest and light diet.

He proposes by an early removal of the cause—pregnancy—to stay the progress of the disease at a stage so early as to admit of resolution. As albuminuria occurs during the latter months of pregnancy, the operation does not necessarily destroy the fœtus.

The author has carefully collected the record of deaths following the operation, and in successful cases has followed up the histories of the mothers. He compares the relative mortality, as regards parent and child, from eclampsia, forceps, version, craniotomy, and artificially-induced premature labor.

After proving the advisability of the induction of premature labor, he considers the various operations proposed for the accomplishment of that end. Of these he greatly prefers those of Dr. Barnes, which are "preparatory, provocative, and accelerative."

The paper is evidently the result of laborious research. It is convincing and cheering; for, if the deductions of the writer are correct,—and they are proved by figures,—many lives can be saved, as premature labor artificially induced is less dangerous to mother and child than chloroform or bleeding, while its results are more satisfactory.

THE ANTISEPTIC SYSTEM. A Treatise on Carbolic Acid and its Compounds. By ARTHUR ERNEST SANSOM, M.D., London. 8vo, pp. 356. Philadelphia, J. B. Lippincott & Co., 1871. (Reprint.)

With the exception of a single chapter, which treats of the sulpho-carbolates, the above substantial volume is devoted to the consideration of a single article. Simpson's huge tome on "Acupressure," and the numerous other massive contributions to the merits of a single process or system, are evidences of the tendency of the modern mind towards monography: general treatises are out of fashion.

Dr. Sansom finds material enough in the theme of "carbolic acid" to discourse learnedly through 347 pages octavo. It is true that the greater part of this space is given up to the discussion of the fungal theory of disease,—the pages treating of the immediate use of the acid being limited to 131. From this it would appear that the title "The Antiseptic System" placed on the back of the volume gives one an erroneous impression of the nature of the contents thereof.

The chapter on the theory of the subject having already been reviewed editorially in a previous number of this journal, we will confine our remarks to the practical part of the work.

Our author is evidently an enthusiast,—though his enthusiasm is tempered withal by judgment. Through an advanced interest early evinced in the subject he has become acquainted with its literature, and finally assumes towards it the honored position of historian. The book is, in a word, a running commentary on abstracts selected from an imposing list of authors, whose contributions—great and small—are here preserved. It is, therefore, apart from being a special plea for the virtues of carbolic acid, a bibliographical repository beyond whose copious references—since the preface bears a date so recent as "June, 1871"—the student need not care to search.

The following are some of the suggestive titles to chapters in that portion of the volume treating of the *uses* of the agent in question. Carbolic acid as a disinfectant; The external employment of carbolic acid; The treatment of wounds; The control and prevention of suppuration; Principles of the antiseptic system in the treatment of wounds; The antiseptic method in surgical practice.

Of these, beyond doubt, the most important are the chapters treating of the use of the acid in affections of the external surfaces inclusive of the respiratory tract.

The curious anæsthetic effects of the acid in common with a few other substances, among which may be mentioned the essential oil of peppermint, are mentioned, and credit given to Dr. Bill, U.S.A., who was among the first to direct attention to this property. He, it will be remembered, secured good results towards obtunding the sensibility of the integument over which a brush dipped in liquefied carbolic acid had been drawn. Upon the same indication the use of a lotion containing carbolic acid, one part to four of hot water, may be used with advantage in pruritus and lichen, as well as to meet indications for a parasiticide. As a counter-irritant efficient as well as of easy application, it is recommended from personal observation of the author. It is a disinfectant of undoubted power; its merits in this direction have long been recognized.

But these and other claims in its behalf are of minor importance when compared with the influence exerted by this curious article over the process of suppuration. It is in this department of its usefulness, so to speak, that the most brilliant results have been obtained. It is in great part to the labors of Lemaire and Lister that we are indebted for our knowledge of this subject, and Dr. Sansom gives *in extenso* the observa-

tions and conclusions of these gentlemen. To Prof. Lister, more particularly, much space is given in detailing his method, now so famous, of treating wounds, and of conducting the after-treatment of surgical operations. The impression after perusal of this portion of the book is to the effect that carbolic acid is a most valuable and permanent addition to the practitioner's *materia chirurgica*. It should everywhere receive the earnest attention of hospital surgeons. We would here refer the reader to a recent number of the Cincinnati *Lancet and Observer* for an instructive account by Dr. Connor, in which is given Lister's latest method of conducting a surgical case under the carbolic-acid sprayer, carbolized gauze, etc. In glancing over the pages of this volume we have been pleased to find the recognition of American literary labor. Dr. Cleborne, U.S.N. (not U.S.A., as given on page 272), is spoken of as having contributed one of the earliest notes on the value of the acid in the treatment of boils and carbuncles (*Journal of the Med. Sci.*, 1869). Under the attempts towards an antiseptic result, mention might also have been made of the benzoated ligature of Dr. Mason Warren, of Boston,—which was used by him in his early operation of staphylophary years ago.

The book presents that elegant appearance for which the publications of Lippincott & Co. are so justly noted. An *addendum* of nine plates, containing forty-two wood-cuts, is given,—most of the figures being derived from Beale, of whom Dr. Sansom expresses a profound admiration. Thirty-one formulæ are described. It would be an evidence of not a little ingenuity to devise a new mode of compounding this popular article.

HANDBOOK OF PRACTICAL OBSTETRICS, INCLUDING ANÆSTHETICS. By JOHN TANNER, M.D., M.A., LL.D. 18mo, pp. 237. Reprint by J. B. Lippincott & Co., Philadelphia, 1871.

This little book of 237 pages is intended to supply an existing need for a concise work on this subject for ready reference, and with a little more care it would have filled the place for which it was intended. In looking over it, we find some omissions and inaccuracies, and the meagreness with which some subjects are treated somewhat impairs the value of the book.

As the preface states, it is intended for students, so that "by its aid the student will be enabled to go to the bedside of the lying-in for the first time with perfect confidence in himself." If he depended entirely on this work, we are sure he would be at a loss in many cases, as it is almost too concise to answer the wants of the student. Notwithstanding its faults, it has some redeeming qualities, and one of the best of these is the copious and generally well-selected illustrations, which are unusually abundant for so small a work.

BOOKS AND PAMPHLETS RECEIVED.

Essentials of the Principles and Practice of Medicine. A Handbook for Students and Practitioners. By Henry Hartshorne, M.D., Professor of Hygiene in the University of Pennsylvania, etc. Third Edition, thoroughly Revised. 12mo, pp. xi., 487. Philadelphia, Henry C. Lea, 1871.

Medical Education in America: Being the Annual Address read before the Massachusetts Medical Society, June 7, 1871. By Henry J. Bigelow, M.D., Professor of Surgery in Harvard University. Pamphlet, pp. 83. Cambridge, Welch, Bigelow & Co., 1871.

On Sudden Death soon after Parturition. By Thomas More Madden, M.D., M.R.I.A., Dublin University. Reprinted from the *American Journal of Obstetrics*. Pamphlet, pp. 11.

A New Ovariectomy Clamp; also applicable for other Surgical Purposes. By B. F. Dawson, M.D., New York. Pamphlet, pp. 6.

The United States Patent Law. Instructions how to obtain Letters Patent for New Inventions. By Munn & Co., Solicitors of Patents. 18mo, pp. 119. Published at the Office of the *Scientific American*, New York, 1871.

GLEANINGS FROM OUR EXCHANGES.

ELECTRO-PUNCTURE OF THE HEART IN APPARENT DEATH FROM CHLOROFORM.—The means (*British Medical Journal*, September 16) at our disposal for the restoration of persons in whom life is endangered while they are under the influence of anæsthetics, are not so certain of success that we can afford to rest content with them. For this reason we here place before our readers an abstract of a very interesting paper on electro-puncture of the heart as a restorative measure in chloroform-syncope, published in the last number of Langenbeck's *Archiv für klinische Chirurgie*, by Dr. Steiner, of Vienna. It will be seen that the author of the paper does not assert that electro-puncture is an absolutely infallible remedy, but he produces sufficient evidence in favor of the innocuity, and at least occasional success, of the operation, to entitle it to consideration.

Dr. Steiner, after some preliminary remarks, quotes a number of cases from various authors to show that while in some instances punctured wounds of the heart, even by so small an instrument as a needle, have been followed by death, in others the injuries have been recovered from, the article by which the lesion was inflicted having been sometimes found in the wall of the heart after death from some independent disease, years after. To ascertain by direct experiment the effect of puncture of the heart, Dr. Steiner introduced needles into the hearts of various animals,—namely, horses, an ass, dogs, cats, and rabbits. The results of fourteen experiments of this kind have led Dr. Steiner to conclude that puncture of the ventricular wall with a needle is not attended with danger, provided that the instrument be at once removed. If allowed to remain, or moved to and fro, it may produce fatal inflammation or laceration of the muscular substance. Puncture of an auricle or of a coronary artery is followed by continuous and fatal hemorrhage; though there is just a possibility that the hemorrhage from the artery may be arrested by the formation of a plug. If the needle penetrate the endocardium, the contractions of the heart may in one or two minutes produce such an amount of laceration of the muscular fibre as to lead to rupture of the heart at this point. The careful temporary introduction of a needle into the substance of the heart is, then, not necessarily dangerous. Turning, next, to the subject of galvanism, Dr. Steiner observes that in two recorded cases of chloroform-poisoning attempts were made to excite the heart's action by the galvanic current. They were, however, both unsuccessful, the remedy not having been applied until all other usual means had failed. No conclusion, therefore, as to the effect of galvanism on the heart could be drawn from them.

The principal objections raised against electro-puncture of the heart are, first, that it may do harm by cauterizing it, and, secondly, that it may give rise to a dangerous development of gas. Dr. Steiner has found that these objections are without weight in regard to a weak interrupted current, which is all that should be used for the purpose of resuscitation. Even after passing a continuous current for a quarter of an hour into hearts filled with blood, there was only a slight extrication of gas by the electrolytic action of the battery. The caustic effect was practically nil.

In his experiments on animals narcotized by chloroform, Dr. Steiner found the most useful instrument to be a single-celled Smee's battery with an induction apparatus. The needle was introduced before the full effect of the chloroform was produced; and in this way the arrest of the heart's action was at once indicated by the cessation of the movements of the needle. Of the experiments performed, six were successful and ten unsuccessful. In seven other cases artificial respiration failed to restore the animals.

The conclusions at which Dr. Steiner has arrived from his experiments are the following. Electro-puncture of the heart is not dangerous. In cases of arrest of the heart's action by chloroform, even the immediate application of electro-puncture to the heart is not a certain means of resuscitation. The cause of this lies in the rapidity with which the heart loses its irritability after arrest of its action; and this occurs sooner under the influence of chloroform than in ordinary circumstances. The immediate application of galvanism to the

heart is to be preferred to artificial respiration in all cases where the cessation of the pulse at the wrist and the apparently fatal collapse indicate the total failure of the heart's action. The success which has in some cases attended artificial respiration is probably to be explained partly by the circumstance that the heart's action has not altogether ceased, and partly by the heart having been irritated during the progress of artificial respiration. In applying electro-puncture, the positive pole should be applied to the needle introduced into the heart, the negative at the scrobiculus cordis or over the seventh intercostal space on the left side. The current should be weak, and should be interrupted every few seconds. Galvanism of the heart applied in this way is not only relatively the most powerful means of rousing the action of the organ, but it also materially favors the inspiratory movements. The reappearance of movements in the needle or of those of respiration, and the return of the pulse at the wrist, are not sufficient indications for ceasing to apply the galvanic current: it must be continued until the heart beats rhythmically and vigorously. When commencing recovery, however, is indicated by the above-mentioned signs, artificial respiration may be employed at the same time with electro-puncture, so as to afford the heart the additional stimulus of a supply of oxidized blood. If no result follow the application of electro-puncture for a period of fifteen minutes, it may be concluded that the irritability of the heart is lost, and that all further attempts at resuscitation will be useless.

The cases, says Dr. Steiner, in which electro-puncture of the heart should be applied are those in which there is profound syncope with rapid collapse, the pulse immediately imperceptible, and the eyelids fallen.

OBSERVATIONS IN REGARD TO THE INFLUENCE OF ALCOHOL UPON THE TEMPERATURE OF THE BODY.—M. Rabow (*Berlin. Klin. Wochenschr.*, May 29) undertook, at the request of Prof. Leyden, a series of experiments to determine whether the ingestion of alcohol was followed by a lowering of the temperature of the body. The experiments appear to have been very carefully performed, the observations being made with the thermometer in the axilla or rectum, where it was allowed to remain from five to ten minutes. In all, twenty-five experiments were made. The results are different from those which have been obtained by American and English observers, for in twenty-three of the experiments an increase of the temperature was noted, and in two of them there was no change, but in no case was diminution observed.

AN INSTRUMENT TO FACILITATE POST-MORTEM EXAMINATION OF THE HEAD.—Mr. Jessop describes in the *British Medical Journal* for September 1 an instrument which he has devised for this purpose. "The instrument," he says, "consists of a solid base of brass, with two thumb-screws, by means of which it can be firmly fastened to the post-mortem table or coffin-board. Attached to the base by two strong hinges is a radial slide, also of brass, in which is fitted a steel spring or clip for holding the head, capable of being moved to either extremity of the slide, and of being held fast at any point by means of two thumb-screws. The blades of the clip are made to secure the head, as in a vice, by means of a leather strap passed through their extremities over the forehead. The backward and forward movements of the radial slide are limited by a quadrant with thumb-screw, and enable it to be set at varying angles with the base. The instrument is also fitted with clips of different sizes and of lighter make, covered with leather, for use in the operating-theatre in cases where the head is required to be held steadily and in which chloroform is inadmissible or otherwise unnecessary."

ULCERATION OF THE CAROTID ARTERY.—Dr. Charles Phelps (*Medical World*, August, 1871, p. 45) ligated the carotid artery below the omo-hyoid muscle under the following circumstances: A man, aged 32, while laboring under an attack of *mania a potu*, drew a razor across the neck, making a wound which extended from the larynx upwards and backwards through the right submaxillary space for an extent of four inches. Upon the twelfth day the wound had united through its whole extent, except at the inner extremity. A slight hemorrhage occurred through this opening on the morning of the same day.

At half-past four o'clock a profuse hemorrhage occurred, necessitating immediate ligation of the carotid. The patient died twenty-four hours thereafter. Upon autopsy, a perforation half an inch long by three-eighths of an inch wide was found in the artery at and below its point of bifurcation.

OBLITERATION OF THE ASCENDING CAVA AT ITS ORIGIN.—M. Jobert reports (*Gazette Hebdomadaire*, August 4) a case in which he diagnosed a complete occlusion of the vena cava ascendens. The patient did not give a very good history of his case, but it appears that about five years before coming under observation he had had an attack of phlegmasia alba dolens of the left leg, probably in consequence of excessive fatigue. At this time he was confined to his bed during a month, and, although afterwards able to work as a cowherd, his left leg was almost constantly oedematous, and his right would become so after prolonged walking or standing. Upon examination, the superficial veins of the two lower limbs, but especially of the left, were moderately dilated. The abdominal parietes were not oedematous, but presented an enormous development of the cutaneous veins, which extended from the hypogastric region to the level of the axillæ.

The patient presented some peculiar gastric symptoms, the most marked of which was boulimia, to appease which he consumed the rations of five soldiers, and he said that he could eat still more. The thirst was not excessive, and the urine was found to be normal. It was thought that the boulimia might be caused by the presence of a tapeworm; but, as none was passed after the administration of kosoos, which was given as an anthelmintic, this opinion was abandoned.

PROF. SAYRE'S VERTEBRATED PROBE AND CATHETER.—In the *British Medical Journal* for July 22, 1871, Prof. Sayre, of New York, describes the vertebrated probe and catheter which he has devised, as follows:

"It consists simply of a series of hollow silver disks, made a trifle smaller at one end than at the other, so as to fit into one another, like a pile of cups or tumblers. These are held together by a linked chain running through the series and jointed nearly opposite each disk-insertion. The chain terminates in a square rod which runs through the last disk and is much larger than any of the others; and on the end of the small rod is cut a thread, on which runs a small button-screw, which can make the chain tight or loose at pleasure. Of course, when the screw is turned back, the chain being lengthened, the disks fall away from one another, and the probe is as limber as a chain, capable of following any sinuosity into which it may be pushed; and by a few turns of the screw, the chain being shortened, the disks are drawn firmly together, so as to make a solid probe, which will give the concussion against carious or necrosed bone, the same as any other probe. A small slot is made in the canula containing the screw, for the purpose of putting a small nut which regulates the tension of the chain and thus prevents the possibility of applying any sufficient force to break it. There are two fenestræ at the distal disk, for the purpose of drawing an oakum seton through deep sinuses and carious joints; this makes it also very useful as a catheter in cases of tortuous urethra from enlarged prostate. It is impossible to make a false passage with it, and, as it is simply a series of ball-and-socket or universal joints, it will follow any passage, however devious. By simply unscrewing the steel bulb at the end, and inserting a bulb of porcelain, according to the suggestion of Nélaton, you have the most perfect bullet-probe that can be desired.

"To clean it, it is necessary to unscrew it at the end, and to remove the small screw at the slot in the canula, when it will immediately fall to pieces. After washing, it is easily put together, just the same as a string of beads, only remembering to put the small end at the disk on the wire first; and, as each disk increases in length until the end, of course no error can occur in making them fit properly."

The description is illustrated by two wood-cuts.

IMMUNITY OF ANIMALS OF CERTAIN COLORS FROM POISON.—Prof. Wyman (*Boston Med. and Surg. Jour.*, August 17, 1871, p. 107) records some observations on the immunity of animals of certain colors from the action of poison. In Florida, on the upper St. John River, he found that all the hogs were black, the reason being that a species of flag on which hogs

feed in that country caused in white ones a disease in the hoof, from which this appendage gradually loosened and fell off without any ulcerative process, and was not redeveloped, and the animal became useless. In black ones, however, this does not occur. In hogs of mixed color, if any considerable portion of the body is white they are poisoned. In connection with these curious facts, he mentioned that the Jamestown weed, as is well known, produces an eruption around the nostrils of white horses.

[In an article on Anosmia, contributed to the last volume of the Transactions of the Medico-Chirurgical Society of London, Dr. W. Ogle attributes this immunity of dark-colored animals to the fact that the olfactory organ is more liberally supplied with pigment in these than in light-colored animals. This pigment is as essential, he thinks, to the sense of smell, as is that of the choroid membrane to the vision; and, consequently, animals in whom it is absent are unable to recognize poisonous plants.—EDS.]

ON SESQUICHLORIDE OF IRON AS A PROPHYLACTIC OF ACUTE RHEUMATISM.—Dr. Anstie (*Practitioner*, September) has treated six cases of acute rheumatism with the tincture of the sesquichloride of iron, and in four of these he thinks the results distinctly bore out the main assertions of Dr. Russell Reynolds, by whom this remedy was originally recommended in the treatment of this disease. He has also found the sesquichloride useful as a prophylactic. "Whenever," he says, "a patient has presented himself with articular pain and slight fever that were plainly of the rheumatic and not of the gouty type, he has been at once placed on thirty- or forty-minim doses of the tincture of sesquichloride, from three to six of which, according to the severity of the symptoms, have been given in each twenty-four hours. I have several times called the attention of the students to the fact that (unlike what used to happen) these cases now reappear in my out-patient room on my next hospital day, and, in the great majority of instances, declare themselves greatly relieved."

GASTRIC JUICE IN THE TREATMENT OF CANCER.—Dr. D'Arpém (*L'Union Médicale*, September 2, 1871, from *L'Imparziale*) gives the particulars of a case of ulcerated cancer of the rectum treated by injections of artificial gastric juice. After the employment of other remedies which had proved inefficacious, twenty-five grammes of gastric juice, obtained from Prof. Schiff, and made into an emulsion with glycerine, were administered by injection. The immediate effect of this was to produce intense pain in the rectum, palpitations of the heart, and vesical tenesmus. An hour after, the patient passed blood, partly liquid and partly in clots, together with a gelatiniform débris, which had a very repulsive odor. The next day the remedy was repeated, but was followed by the injection of sweet oil to mitigate the pain arising from it. The same effects were produced, except that the suffering was less severe. The injections were administered three times daily during twenty days, at the end of which she considered herself well, but, at the recommendation of Dr. D'Arpém, she continued their use for eight days longer. Having at that time ceased to pass any débris of the tumor, she afterwards used only injections of sweet oil. After a long absence she again presented herself to Dr. D'Arpém, who says that the cure at that time was complete.

BIZZZERO ON THE DEVELOPMENT OF BLOOD-CORPUSCLES IN THE MEDULLA OF BONES.—In No. 10 of the *Medical Times*, March 1, 1871, we introduced from the *Quarterly Journal of Microscopical Science* for January, 1871, some researches of Neumann on the Development of Blood-Corpuscles.* From the same journal, issue of July 1, we publish some additional observations originally contributed by Bizzzero to *Virchow's Archives*, vol. lii. p. 156, who distinguishes three kinds of osseous medulla,—the *red*, the *yellow*, and the *gelatinous*. The red occupies the most important position with respect to the formation of blood. It consists of three varieties of cells:

1. Cells analogous to the white corpuscles of the blood, .005 mm. to .010 mm. in diameter, sometimes without a nucleus, sometimes containing a divided nucleus or even two nuclei. Their contractility is very remarkable, and was observed by Bizzzero so long ago as 1865. He has also directly observed in four frogs multiplication of these cells by division; the actively-moving cell drew itself out, became constricted in the middle, and finally separated into two parts. The obvious objection that such cells might be migrated blood-cells was met by the experiment of carefully washing out with solution of common salt the vessels of rabbits recently killed by bleeding, before examination of the medulla. The number of bodies resembling leucocytes was not in any degree diminished. It was also observed that the number of cells contained in the medulla was very far out of proportion to any that could be contained within the vessels.

2. Red nucleated cells, discovered by Neumann. These vary from .008 mm. to .012 mm., or more, in diameter. They show every transitional form, from the colorless nucleated cells to the red blood-disks; some showing a large nucleus and colorless protoplasm, others one or more small nuclei and a protoplasmic mass of the same color as the red blood-disks. The vanishing of the nucleus takes place by a kind of atrophy, the nucleus breaking up into granules. Elongated cells with two nuclei—one at each end—were also observed. They are either spindle-shaped or narrow in the middle, and show the process of division of red cells.

3. "Gigantic" or myeloid cells, with proliferating central nucleus, were observed. Their size is .025 mm. to .045 mm. They have an irregular round, oval, or kidney shape. They differ from the *myeloplaxes* of Robin in shape, size, and consistence, as well as in their locality.

4. White cells containing red globules were first discovered by Bizzzero himself in 1868, and are commonly, though not constantly, present. The shape of these is extremely various;—in animals, mostly round or oval; in man, more often angular or spindle-shaped. Their size is .01 mm. to .05 mm. The protoplasm is colorless or slightly yellowish, but contains red globules and pigment-granules. The number of red globules is from one to eight, or, in pathological conditions, even as many as thirty or fifty. Pigment-granules occur with or without the blood-disks, and are sometimes three or four times as large. These cells Bizzzero declares to be concerned in the destruction of blood-disks, and he compares them to the similar forms described by Kölliker in the spleen.

The blood-vessels are described by Bizzzero and Neumann as extremely abundant in the red medulla, composing more than half its substance. Bizzzero has also observed *capillaries*, which Neumann failed to find, and has both isolated them and demonstrated their longitudinal spindle-cells by injections.

The arteries and veins form a kind of framework, in the interstices of which are contained the proper elements of the medulla. While Neumann finds the red blood-cells always within the vessels, Bizzzero observed his cells containing red blood-globules outside the vessels. The medullary cells are scattered in quite a disorderly manner in the meshes of the vascular network; the gigantic cells occur at intervals, separated by more or less considerable masses of medullary cells. The connective-tissue cells, with their prolongations, form a sort of network, which is demonstrated very clearly on teasing out sections of the medulla hardened in potassium bichromate, or, better, in osmic acid.

The *gelatinous* medulla differs from the red by its abundant intercellular substance. While in the red medulla the spaces between the vessels are almost filled with cellular elements, there is in the gelatinous a large quantity of amorphous, translucent, colorless, or faint yellowish substance, which coagulates with dilute acetic acid and dissolves in an excess of that reagent. Moreover, the nucleated blood-cells, and especially the cells containing blood-globules or pigment, are rare.

The *yellow* medulla is distinguished from both the others by its richness in fat-cells. Various transitional forms between these three varieties may be met with. These facts and their pathological variations illustrate the great analogy of the medulla with the spleen.

* See, also, in No. 20, July 15, of this journal, a case of *Leukæmia*, with slight splenic enlargement and hyperplastic growth of the medulla of the bones, from *Virchow's Archives*, March, 1871, bearing upon the same interesting subject.

Four experiments were made to determine the effect of starvation on the medulla. In a healthy, well-fed rabbit the leg was amputated, and the medulla of the tibia found to be of a gray color below and grayish-red in the upper part, while the microscope revealed a large number of fat-cells. In starved rabbits the corresponding structure was found to be of a dark-red color and highly vascular. The microscope showed enormous dilatation of the vessels, the veins in some parts touching one another and leaving hardly any space for the proper medullary tissue. Where there was any interval, it was found occupied by amorphous matter, or else by nothing but medullary cells.

THE PHOSPHORESCENCE OF FISHES.—M. Panceri, as the result of some investigations (*Gaz. Méd.*, Sept. 9, 1871), states it as his belief that the phosphorescence of certain fishes is a property possessed by the fat in their bodies. He presented to the Society of Naturalists of Italy a specimen of the *Trachyterus iris*, which in the daytime resembles a ribbon of silver, but at night has the appearance of a sword of fire. A single fish will produce enough light in a room to enable observers to recognize one another.

MISCELLANY.

THE WEATHER DURING SEPTEMBER.—The record of the weather kept at the Pennsylvania Hospital exhibits the following facts in reference to the temperature during the month of September. The mean temperature was 63.88 degrees, nearly seven degrees less than that of September, 1870, and about three degrees less than the average temperature of the month for the past eighty years. The highest point reached by the thermometer was on the 6th ultimo, when it marked 80.5 degrees, and the lowest on the 21st ultimo, when it descended to 43 degrees, presenting a range of 37.5 degrees. The highest marking of the thermometer in September, 1870, was 86 degrees, and the lowest 54 degrees. The fall of rain during the past month was 1.77 inches, while that of the month of September, 1870, was 1.71 inches. In September, 1869, it was 3.25 inches, and in 1868, 8.90 inches.

AN UNFORTUNATE CASE OF POISONING has recently occurred in the lower part of the city. The evidence at the coroner's inquest was somewhat contradictory, but it appears that the wife of the deceased asked for black draught, and received instead from the apothecary a preparation of opium. The apothecary, who is also a practitioner of medicine, asserts that he explained to the woman the nature of the remedy sold, and the way to use it, telling her that it was better suited to relieve the neuralgic affection from which her husband was suffering than the infusion of senna and salts, which is very likely to have been the case. Moreover, the preparation sold was not black drop,—which, it will be remembered, was once dispensed in this city for black draught, thereby causing the death of a woman who had only recently arrived in this country from England, where the latter is a very popular remedy,—but wine of opium diluted. The dose, however, appears to have been large, and it was administered every hour, instead of every three hours, as prescribed. No treatment directed towards the removal of the opium from the stomach of the unfortunate man, or towards counteracting its effects, seems to have been employed.

Popular names for medicines are very frequently quite local, and it is surprising how many American druggists are ignorant of the composition of black draught. Prof. Bridges, of the

School of Pharmacy, tells us that he has recently heard of a man searching in vain throughout the city for the extract of liquorice under the name of Spanish juice.

ST. THOMAS' HOSPITAL.—A correspondent of the *Medical Times and Gazette* calls attention to some blunders which he conceives to have been made in the erection and fitting-up of the new hospital. A large sum of money has been spent upon the exterior of the building, upon the treasurer's residence, and upon a banquetting-hall, while the wards are furnished in the scantiest manner. The resident physician's accommodations are insufficient and at an inconvenient distance from the wards. The out-patients, after having been prescribed for, have to walk half the length of the building, without protection from the weather, to procure their medicines. The writer says, "We had heard rumors that all was not perfectly satisfactory in the new establishment, and that suggestions from those who might be supposed to know best had been consistently set on one side; but we were hardly prepared for the series of blunders we encountered."

FAILURE OF CONDURANGO.—The following, from the *British Medical Journal* for September 9, 1871, accords with the expectations of most thinking physicians on this subject:

"All that we hear of the results of the trials given to the Condurango bark furnished by our Government to the Middlesex and St. Bartholomew's Hospital, through the College of Physicians, confirms the fear that any hope which might have been entertained of a confirmation of the statement of its utility as a remedy in cancer must be entirely dismissed. Physiologically it appears to be practically inert, and its therapeutic effects in the treatment of cancer to be *nil*. It furnishes a slightly bitter extract of feeble characters. A detailed therapeutic report will be made by Mr. Hulke, and a careful examination of its physiological action by Dr. Brunton, but this mainly in deference rather to the official sources from which this small supply has been furnished, and to set at rest the excitement caused by the somewhat scandalous claims which have been set up in its favor."

CARBOLIC ACID IN SNAKE-BITE.—Dr. S. Weir Mitchell (*British Medical Journal*, July 15, 1871), from observations on the bite of the rattlesnake, and MM. Greguian and Vioud Grand-Marais (*Jour. de Méd. de l'Ouest*, and *Bull. Génér. de Thér.*, March 30, 1871), from observations on that of the viper, have arrived at the conclusion that the application of carbolic acid immediately on the receipt of the injury prevents both local and general poisoning. The pure acid, however, if applied in too great a quantity, is liable to produce sloughing, and even dangerous symptoms: hence it is best used in the proportion of two parts of acid and one of alcohol. Given internally, or applied to the wound at a late period, it has no effect. It is believed to act, not by neutralizing the poison, but by causing contraction of the small vessels and thus preventing its absorption.

Apropos of the above, Dr. E. A. Grove, of Carlisle, Pa., writes to us describing a case of copperhead-snake-bite and its treatment. A laborer on the railroad, aged 20, was bitten, while at work, on the palmar surface of the second phalanx of his index-finger. He immediately tied a cord around the finger as tightly as possible, with the view of preventing the absorption of the poison. When the doctor saw it, the finger was much swollen and very dark in color, while the arm was also considerably swollen. The cord, which completely obstructed the circulation, was promptly removed, the wound was freely incised, and carbolic acid applied with the view of coagulating the albumen and causing contraction of the capil-

laries,—thus to prevent the absorption of the venom. The part was then dressed with a solution of muriate of ammonia, — $\frac{3}{4}$ ss to the pint of water. Whiskey and aromatic spirits of ammonia were administered internally.

In a few days sloughing set in, and the doctor was compelled to disarticulate the second phalanx from the third, when the patient promptly recovered. The use of the ligature in this instance makes it impossible to draw any conclusion. It is likely that it was alone sufficient to produce the sloughing which unfortunately complicates the case.

ALLEGED CURE FOR SNAKE-BITE.—Dr. Hill reports in the *New South Wales Medical Gazette* a case in which a woman bitten on the forearm by a large black snake was treated by ammonia and brandy, while the bitten part was promptly excised. After a time drowsiness and vomiting set in, and the patient recovered. The value of this case in determining the efficiency of the mode of treatment adopted must remain uncertain to North Americans. For although the term black snake is a very general one, in this country it is applied to a species of snake well known to be harmless in its bite. By these remarks, however, we do not wish to be considered as disparaging the value of the ammonia treatment as determined by better evidence; and we are very glad to learn by the *Medical Times and Gazette* for July 15, 1871, that Prof. Halford, of Melbourne, has been presented with a testimonial as a recognition of the merits of his method of treating cases of snake-bite by the injection of ammonia. The testimonial consisted of a handsomely-bound book and a purse containing one hundred and twenty sovereigns. In making his acknowledgment, Prof. Halford gave an interesting explanation of the circumstances which led to the discovery, and expressed his belief that this mode of treatment was capable of extension to constitutional diseases. An influential committee was also appointed by those present to wait upon the Government in order to ask that a sum of money might be placed in Prof. Halford's hands to enable him to make experiments in this direction.

A NEW WAY TO ADMINISTER REMEDIES.—Prof. Almen, of Upsal, recommends gelatine as a vehicle for the administration of remedies. Six grammes of gelatine are dissolved in hot water, and the medicine then added to the solution, which is then thrown upon a glass surface and allowed to evaporate. Insoluble medicines must be mixed with a thick emulsion of gum arabic before being added to the solution of gelatine. We see by the journals that medicines are prepared in the above way in Cincinnati.

A small quantity of glycerine added to the mixture will render the preparation less friable, and as flexible as paper. The mass is afterwards to be divided into squares, each representing a fixed dose of the incorporated medicine. In this way the acetate of morphia, tartar emetic, sulphate of copper, the extracts of opium and of belladonna, the powder of ipecacuanha, of digitalis, and of camphor, have been administered.

NEW MEDICAL SCHOLARSHIPS.—We learn from the *Medical Times and Gazette* of July 22 that a portion of the share of students' fees recently relinquished by the governors of St. Mary's Hospital, London, for the benefit of the Medical School, have been devoted to the foundation of three scholarships in natural science, each of the annual value of £40 and tenable for three years. The first of these, and also an exhibi-

tion in natural science of the value of £20, will be awarded in September next, by open competitive examination.

A RELIC OF BARBARISM.—The above is the appropriate title for a recent action of an English court of assizes sitting under Mr. Justice Lush. Rachel Busby, indicted for the wilful murder of her child by drowning it in a pool near the cottage in which she lived, pleaded guilty, and was sentenced to death. Having stated in answer to a question that she was *enceinte*, a jury of matrons were empanelled and confirmed her statement. She was then removed to the county jail, and has since been respited. It is justly remarked by the editor of the *Medical Times and Gazette* that it may have been very well in dark and mediæval times to take a jury of matrons in consultation on this point, but that in the present advanced state of medical knowledge it is an amazing anomaly to have recourse to such a means of arriving at a diagnosis in a matter on which the surgeon of the jail could have given much more reliable information. The former method, however, seems to be still the legal one of settling this question.

TOBACCO AND ALCOHOL.—The following extract from a chapter on "The Medical Aspect of Tobacco-Smoking," contributed by Dr. E. B. Gray to the September number of the *Food Journal*, is taken from the *Medical Times and Gazette* for September 16:

"Tobacco should be used as supplementary to food, not as a substitute for it. The season, therefore, for healthy smoking is after a meal. Tobacco should not be taken on an empty stomach (unless to stave off hunger) any more than alcohol. Smoking merely to kill time or to color a pipe is a childish abuse of tobacco. Against moderate smoking in a healthy person who enjoys it, not a single argument of any weight has yet been advanced. Perhaps the most plausible of them is this: that every smoker daily imbibes a small quantity of tobacco-oil and nicotine; and as these substances taken by themselves in the pure concentrated state and in large doses are highly poisonous, therefore every smoker is daily poisoning himself. Just as reasonable is it to condemn all alcoholic drinks, such as wine, beer, etc., as pernicious, because a draught of pure alcohol will nearly or quite kill a man; or to condemn tea and coffee as dangerous drinks, because their active principles, theine and caffeine, taken alone or in large doses are poisons.

"One of the best-established truths in medical science is that the same physiological agent, according to the dose given, may produce effects which differ not only in degree but in kind. The idea of tobacco or other such agent slowly accumulating in the system and at length producing the effect of a single large dose, is *a priori* absurd, and also contradicted by experience.

"So much, and often so much nonsense, is prated about the evils of tobacco, that its virtues rarely get a hearing; and yet the latter are many and great. To quell nervous unrest, to soothe a ruffled temper, to favor calm and impartial thought, to steady and clear (not to cloud) a confused overworked brain, to counteract the effects of physical exhaustion,—these are just the things that tobacco does; and if it can effect these things safely and pleasantly, who shall deny it a place among God's good gifts to man?"

This is certainly most comfortable doctrine for the habitual smoker,—much more so, certainly, than that to be found in the report of M. Jolly to the Académie de Médecine on *L'Absinthe et le Tabac* (*Bulletin de l'Académie*, August 31, 1871). This gentleman takes a very different view of the effects of tobacco, even in moderate quantities, upon the human system, and is disposed to attribute many of the evils under which Paris is now suffering to the demoralization of the Parisians produced by the excessive use of tobacco and alcohol. "It must be confessed," he says, "that more of our

soldiers have fallen into the power of the enemy intoxicated with alcohol or nicotin than in consequence of wounds, and that even in the days when the national destiny was confided to the militia it was not rare to see armed civilians staggering in the streets, or even whole battalions marching to the field like a herd of drunkards and throwing themselves blindly into the midst of their enemies."

The writer alludes to the greater mortality after wounds among habitual drunkards than among the sober, and also to the great increase in the number of the insane and of the sufferers from various nervous affections since tobacco has come into general use.

NOTES ON THE HISTORY OF OVIARTOMY, BY DR. NATTA-SOLERI VINCENTO.—The *Edinburgh Medical Journal* for July, 1871, extracts from the *Gazette Médicale de Paris*, No. 124, 1870, the following notes on the history of ovariectomy:

"In 1752 the idea of ovariectomy entered the mind of an illustrious Italian, Jean Targioni Tozzetti, of Tuscany, after seeing a case in which the ovary had been successfully removed from a young girl by a man quite ignorant of surgery.

"Morgagni next, having made the distinction between simple or unilocular cysts and multilocular ones, stated that the first might be removed in cases where adhesions did not exist. It was a great step towards the admission of this operation to state, in 1761, the indications which should contraindicate its performance. Time and experience could do the rest.

"Later, Monteggia, fearing the results of the operation which might follow extensive incisions, advised early operation, before the cyst had attained a large size or contracted adhesions. At length, in 1815, a modest surgeon, Emiliani Gaetano, of Faenza, a man full of wisdom and daring, attempted the operation on a young woman, aged twenty-six. An otherwise good state of health encouraged the attempt, and the patient consented. He made an incision, eight inches in length, in the linea alba, through the whole thickness of the abdominal wall, down to the peritoneum, which he divided cautiously. The left ovary, much enlarged, then presented itself, and he recognized it adherent to the lower part of the colon. The adhesions being overcome, the tumor was got out of the belly, was removed, the vessels being tied as they were divided, after which the edges of the wound were united by suture and covered by charpie and a gentle retentive bandage. The case recovered; and thus it is not Hizers [Sizars] of Edinburgh who must be considered the first to practise ovariectomy scientifically in Europe, as he did not operate till 1825, or ten years after Dr. Emiliani of Faenza. Ovariectomy was introduced into Europe in 1815* through Italy, as can be verified by consulting the *Bulletino delle Scienze Mediche di Bologna*, where a detailed account of this operation will be found, which deserves a place among the first in the annals of surgery."

MR. GROTE'S BRAIN.—The examination by Mr. Marshall of the eminent historian's head has revealed the fact that the brain was remarkably small. It is said, however, to have been unusually rich in convolutions.

APPOINTMENTS.—Dr. Erskine Mason, formerly Demonstrator of Anatomy in the College of Physicians and Surgeons, New York, has been appointed Adjunct Professor of Surgery in University Medical College in the same city.

Dr. Silver, the Senior Assistant Physician at the Charing Cross Hospital, London, becomes full Physician, succeeding the lamented late Dr. Hyde Salter.

HOSPITAL IMPROVEMENTS.—We learn from the *New York Medical Record* that the new amphitheatre of the Bellevue Hospital is now completed, and was formally opened by the Medical Board of the Hospital on September 15. The lec-

ture-room is capable of seating eight hundred students, and is said to be the largest and most complete in the country, if not in the world. The ventilation is excellent, and the light is reflected from the rotunda.

SCARLATINA UNKNOWN IN INDIA.—The editor of the *Indian Medical Gazette*, June 1, 1871, asserts that scarlatina is unknown in India, and is satisfied that a case reported as such by Dr. Maunsell was not a genuine case of the disease.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending	
	Sept. 30.	Oct. 7.
Consumption	43	35
Other Diseases of Respiratory Organs	25	27
Diseases of Organs of Circulation	17	10
Diseases of Brain and Nervous System	37	35
Diseases of the Digestive Organs	21	19
Diseases of the Genito-Urinary Organs	2	3
Zymotic Diseases	25	40
Cancer	10	6
Debility	30	28
Intemperance	1	1
Casualties	9	8
Old Age	14	10
Stillborn	18	20
Suicide	2	3
Syphilis	1	1
Hydrophobia	0	1
Scrofula	0	1
Unclassifiable	13	12
Unknown	1	2
Totals	269	262
Adults	142	131
Minors	127	131

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM SEPTEMBER 19, 1871, TO OCTOBER 4, 1871, INCLUSIVE.

HEAD, J. F., SURGEON AND MEDICAL DIRECTOR.—By S. O. 212, Department of Dakota, September 16, 1871, granted leave of absence for twenty days.

HEGER, A., SURGEON.—By S. O. 212, Department of Dakota, c.s., to perform duties of Medical Director during temporary absence of Surgeon Head.

CLEMENTS, B. A., SURGEON.—By S. O. 59, Military Division of the South, September 27, 1871, leave of absence extended fifteen days.

McKEE, J. C., SURGEON.—By S. O. 205, Department of the East, September 27, 1871, granted leave of absence for twenty days.

McCLELLAN, ELY, ASSISTANT-SURGEON.—By S. O. 383, War Department, A. G. O., September 30, 1871, granted leave of absence for thirty days, with permission to apply for an extension of sixty days.

MIDDLETON, P., ASSISTANT-SURGEON.—By S. O. 196, Department of the South, September 16, 1871, assigned to duty at Frankfort, Ky.

TREMAINE, W. S., ASSISTANT-SURGEON.—By S. O. 167, Department of the Missouri, September 18, 1871, granted leave of absence for thirty days.

MONROE, F. LE B., ASSISTANT-SURGEON.—By S. O. 166, Department of the Platte, September 22, 1871, assigned to temporary duty at Fort Laramie, Wy. T.

GIRARD, J. B., ASSISTANT-SURGEON.—By S. O. 370, War Department, A. G. O., September 21, 1871, leave of absence extended sixty days.

LAUDERDALE, J. V., ASSISTANT-SURGEON.—By S. O. 368, War Department, A. G. O., September 20, 1871, relieved from duty in Department of Arizona, and to proceed to New York City.

KIMBALL, J. P., ASSISTANT-SURGEON.—By S. O. 210, Department of Dakota, Sept. 14, 1871, leave of absence granted for thirty days, with permission to apply for an extension of sixty days.

FITZGERALD, J. A., ASSISTANT-SURGEON.—By S. O. 170, Department of the Missouri, September 22, 1871, assigned to temporary duty at Fort Harker, Kansas.

COWDREY, S. G., ASSISTANT-SURGEON.—By S. O. 170, c. s., Department of the Missouri, to accompany 6th Infantry to Camp Supply, Indian Territory, and, on arrival, report to commanding officer for assignment to duty.

CHERRONNIER, A. V., MEDICAL-STOREKEEPER.—By S. O. 364, War Department, A. G. O., September 18, 1871, assigned to charge of Medical Purveying Depot at San Antonio, Texas.

* From America, the first operation having been performed by Dr. Ephraim McDowell, of Kentucky, in 1809.—Ed.

WEDNESDAY, NOVEMBER 1, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON FLIES AS AN ANNOYANCE TO SURGICAL PATIENTS.

Delivered at the Pennsylvania Hospital, June 14, 1871.

BY ADDINELL HEWSON, M.D.,

One of the Attending Surgeons.

GENTLEMEN,—The patient I now present you will scarcely recognize from his appearance as one whom you have seen before. You will remember, however, that two weeks ago I brought before you a young man who had just then been admitted into the hospital for injuries which he had sustained the day previous in a coal-mine in Schuylkill County, over a hundred miles from here. This is he. His injuries were burns of various degrees, and lacerations, involving the upper and front parts of his body and face,—the results of a premature explosion of powder in the mine. As soon as practicable after the accident, provision was made to convey the patient to our hospital; and as he arrived here, as I have said, just a few minutes before my lecture-hour, I took the opportunity not only of showing you the characters and conditions of his injuries before they were covered with the earth dressings, but also the means by which he had been conveyed from the place where he was injured into the very wards of our hospital, as I thought the latter would be particularly instructive to you. The conveyance, you will remember, was a box a little over six feet long, two and a half feet wide, and some eight or ten inches deep, constructed rudely on the spot out of inch deal boards, with projecting pieces at the ends to serve as handles. This box, filled with hay, had furnished him, at the least cost and delay, a most comfortable means of reaching us here by railroad and other transportation without ever having to be disturbed in any way. I thought this a subject worthy of comment to you at the time, and took the occasion to make some remarks in reference to it, and as to the best modes of moving patients from the places where they have been injured to where they are to be treated.

To-day this patient presents quite a ludicrous appearance as he walks into the room, enveloped with what looks like a long white veil. But this covering is a measure of comfort and protection quite as highly prized by him as the crude box was two weeks ago, for it is a relief from one of the greatest torments to which our surgical patients are subjected at this season of the year, and to which I wish particularly to call your attention to-day. I allude to the flies.

His face and hands, you will remember, were extensively injured; their denuded surfaces have since then become completely healed over under the earth dressings. Here and there you can observe a crust, but the new cuticle covering the burnt parts is as thin and delicate as that of a child, and in that condition is particularly attractive to the flies which are so numerous during this and the next two months. The epithelium covering our bodies is, you all know, directly concerned in the elimination constantly going on of effete matters from the surface of the skin, and for the perfection of the function so performed it is necessary that there should be several layers of cells, as much of the elimination is the result of simple transudation; and if the layers of epithelium are very thin and few in number, the material escaping will not only be more abundant, but in a cruder state than that which comes through a

thicker skin. The protean matters constituting an essential part of the solid ingredients of such eliminations, finding readier escape than usual, make the exhalations from this man's face and hands more palatable to the flies than they would otherwise be. The fact is well known, even to others than entomologists, that the common house-fly's avidity for albumen and albuminous matter is such that it will seek and remove all such materials with great diligence wherever it can find them. It is the greed for such that makes the *musca domestica* so destructive in our libraries, especially to handsomely-bound books which are kept uncovered in conspicuous places. If you will take the pains to examine with a lens the coverings of books of that character which have been exposed for a month or two in the early summer, you will discover that the glazing on them is defective,—that it has evidently been removed in spots. On older books of this kind you can recognize these defects without any aid from a lens, for the spots on them have become filled with dust, and the leather there has assumed a different hue from that of the parts which still retain their glazing, and the contrast makes the mischief done quite apparent. This disfigurement is the result, I have intimated, of the common fly eating the albuminous matter of the glazing, and it is in search of such food that this fly comes to torment us, especially when our bodies are moist and perspiring. The contrivance by which this feeding is accomplished is most wonderfully adapted to its purpose, and readily explains how annoying this little insect can be to us all. A microscopic examination of a fly's proboscis shows that the tongue when protruded separates into two muscular leaves, rough like a rasp on their inside, and capable of acting as a perfect sucker and file on any surface to which it is applied.

The house-fly, like all other flies, is strictly matutinal in its ways, being active only in the light, and always most hungry and industrious about daybreak, as you all no doubt know by personal experience from having gone to bed with your windows wide open, or trying to take a nap after dinner with plenty of light in the room, and then trying either with the room darkened as completely as possible. You can therefore, I am sure, all of you appreciate what an annoyance flies must be in a public institution, especially when you take into account the attractions which exist there for them.

Prominent among the causes of these attractions are the habits of the patients. Many of them never, when in health, wash their persons from one year's end to another; then they all conceal things about their beds, especially cakes and such other edibles as are forbidden them by their attendants; then the dressings and applications are more disarranged at the time in the morning when these insects are most ravenous; and, finally, you may preach till you are tired, but you cannot persuade all the patients of a ward to be content with the room darkened after the day dawns. You can, then, readily imagine how a convalescent patient like this one must be annoyed in our wards by what he may fairly call the devourings of this species of fly.

This is our annoyance from the common house-fly,—the *musca domestica*.

There is another species of fly to be met with, but not so frequently, in the rooms of our surgical patients, which is annoying in another way also. I mean a species of the meat-fly,—the *musca sarcophagia* of Linnæus,—the blow-fly, which is the source of the maggots occasionally to be seen on ulcerated surfaces. There is perhaps nothing more revolting to the patient and his friends, and even to his attendants, than to behold his wound alive with these greedy little objects, looking as though they were about to devour him without any delay. Their presence is, I may say, universally attributed

to want of cleanliness; but this is wrong, for I have seen them on an ulcer within five minutes of its having been washed. If one says *neglect* or *carelessness*, then I give my assent; for my experience is that the part must have been left uncovered, or so imperfectly protected that this fly could get to it. Some attribute these maggots to the common house-fly; but that species of fly is not viviparous, but oviparous, and its eggs require eight or ten days for their development into the larva state. Then the house-fly deposits its eggs only in August and September, and always seeks some secluded spot for them. I cannot now get any such larvae to show, for, as I have just said, they are not in season. They are described in the entomological dictionaries as "cylindrical, rounded posteriorly, smooth and shining, and yellowish white,—four lines long," and are very different, as I shall show, from the maggot which is annoying to us,—that is, from the blow-fly, which is viviparous, depositing maggots as such, and mostly in places where there is plenty of nutriment for them; and this it does in the months of May and June.

Here are specimens of the two species of flies,—the *domestica* and the *sarcophagia*,—on insect-pins.

At first glance you will not notice much difference between the two. In general form they are quite alike. There is, however, quite a difference as to their size. A casual observer may not think this worthy of note, and an uninformed observer might readily attribute the difference to age; but this would be incorrect. The *house-fly*, the smaller of the two, has already attained its full size. There is a most striking difference in the appearance of the bodies of these two flies when examined critically. That of the maggot-producer is checkered like a chess-board, black and white, whereas the body of the house-fly is undefinedly streaked, giving it a more or less uniform grayish hue.

I said this species of fly is *viviparous*. Here is a female which I caught a few minutes ago. She is evidently big with young; and as I compress her body there are extruded on this piece of blue paper, where they can be readily recognized even at some distance, one—two—three—four—until you see I have brought no fewer than thirty-two maggots all alive and kicking into the world. You can after this demonstration believe without the least hesitation what might have been before thought by you to be an exaggeration,—namely, the assertion made by entomologists that one of these flies is able to produce as many as forty maggots at one effort. These maggots present quite a different appearance from that of those coming from the egg of the house-fly. They are not cylindrical, but taper regularly from one end to the other. Their broad end is obliquely truncated, and in this last respect they are very different from the maggot of the house-fly, which you will remember I told you is rounded posteriorly. The meat-fly maggot is much the same in color as the other, and has a blackish line—its alimentary canal—quite distinctly visible in its centre, passing from one end to the other of the body. When just born, as you now see, they measure scarcely the sixteenth of an inch, but they are, as my colleague Dr. Hunt calls them, most industrious scavengers, feeding constantly, and attain their full size of five-eighths of an inch within twenty-four hours after their extrusion from the parent fly. They are the maggots which were so disgustingly numerous among the wounded during our late war, and, as they were particularly to be found on those who had lain uncovered on the battle-field all night, the inference was drawn that the parent fly was in the habit of depositing its maggots at night. But this fly is no more nocturnal in its habits than the *domestica*; indeed, it is precisely like the latter, both as to feeding itself and reproducing its species,—most busy in both operations after a night's rest, and to be kept

from both by darkness; and you can readily understand, after what I have just shown you, that a host of these maggots could be deposited without difficulty between day-and-night and the time for dressing—after breakfast—at this season of the year.

There are other species—the blue-bottle and the green fly—which are in this neighborhood, but not so common about our dwellings or the wards of the hospitals as those of which I have already spoken, for they prefer shady and damp places near the ground. You will see plenty of them in the city, in obscure corners of the market-houses and privies, and about the cellar-windows of grocery-stores. They pinch you with their probosces, when tempted to do so, much more severely than does the common house-fly, and are described as viviparous by some entomologists,—though whether correctly or not I am unable to say. Their season for reproduction is probably other than that of my service, for I have never when on duty—and I have never thought of it at other times—been able to catch a blue or green fly containing even a single maggot.

As to protecting and ridding ourselves of these pests, there are various expedients to be resorted to under different circumstances. You may drive them out with a brush, but, unless something is done to render the place uninviting to them, they will return immediately. There are many weeds or plants emitting an empyreumatic odor which answer well for the purpose. Of such to be found about the country in this neighborhood I know none more effectual than the wild chamomile, a species of anthemis, known also as cotula or Mayweed. The odor of this plant is not at all disagreeable, and branches of the weed when in flower, or some of the dried flowers, scattered about a room, will soon rid it of all flies.

Another means, perhaps quite as efficient and certainly more easily resorted to, is to throw some powdered black pepper on a hot shovel and carry it about the room. The generation of empyreumatic vapors in the same way from other spices will also, it is said, answer the purpose. A few drops of carbolic acid or creasote, on a cloth hung up in the room or used in the dressings, would probably be effectual, but the odor is not usually so acceptable to one's olfactories.

Cooley, in his Practical Receipts, tells us that it is a fact not generally known that flies will not pass through a netting made of fine silk, thread, or wire, even though the meshes are an inch apart, unless there is a window or a light behind it. Hence the satisfaction which the patient before you experiences in getting into a corner of the ward, although it is not darkened, with his net over him. Early yesterday morning I had a demonstration of the truth of the converse of the above, in a man with no more smell about him to attract the flies than there is about the present patient. He was in a bed with a fly-net over him elevated some two and a half feet from the bedding by hoops, and the bed itself was in such a position in the north ward that there were three windows and a door on either side and end of it, so that we could see perfectly through the netting from every direction. As I approached the bed, I noticed and directed the attention of those who were with me to one of these checkered flies sailing about. In a moment she alighted on the net, and, walking a short distance on it, she attained a point apparently in a direct line above where some pus had escaped through the bandage. There she seemed to stop deliberately, and, making an effort, she extruded a number of maggots, which, falling through the netting, were landed close by to where they would have soon found plenty to live on. This furnishes us with an excellent illustration of the influence of light, and why the darkening of the room is an important measure of protection.

Now, there are many means of killing these flies, such as the fly-paper sold in the stores, and various mixtures, either of powder or paste, such as a strong decoction of quassia thickened with moist sugar, or the following mixture: one teaspoonful of powdered black pepper, two of brown sugar, and four of cream. All such, however, are, I think, objectionable, from the fact that they contain saccharine matter to draw the flies. You but invite a host of mourners for those destroyed by the poison, thus in the end aggravating the evil. As to the maggots, they can not only live but thrive under any topical application which is not injurious and painful to ulcerated surfaces; hence, when once in a wound, there is no satisfactory way of ridding the part of them except a mechanical one,—washing or picking them off.

ORIGINAL COMMUNICATIONS.

ENLARGEMENT OF THE LIVER, CAUSED BY ALBUMINOID DEGENERATION.

BY JAMES H. HUTCHINSON, M.D.,

One of the Attending Physicians to the Pennsylvania Hospital.

THE patient whose case I am about to report was under my care for more than three years, and must have had a marked enlargement of the liver for at least two years before that time, for, in addition to the history which he gave me of his illness, I have learned that, five years ago, he was under the care of a physician of this city, who treated him for carcinoma of that organ. Albuminoid degeneration of the viscera is not so common, apparently, in this country as in Europe, but within the last three years no fewer than ten cases have come under my observation. In four of these the diagnosis was verified by the results of the autopsy; in one case, where great enlargement of the liver existed, no post-mortem examination could be obtained; and in the remaining five the patients are believed to be still alive. All these cases, except one, presented a distinct history of antecedent suppuration, confirming in this respect the views of Dr. Dickinson, of London.

For a part of the notes of the case I am indebted to my friend Dr. I. Minis Hays.

D. K., æt. 26, admitted, April 30, 1868, to the Pennsylvania Hospital; born in Ireland; has lived in Philadelphia since he was six years old; unmarried; carpenter; moderate drinker. Is of strumous diathesis. His father died of cancer of the stomach; mother living.

When six years of age, the glands of the right side of his neck began to enlarge; at the end of six months they suppurated, and then healed rapidly.

When seventeen years old (1859), the glands of the left side of his neck enlarged; in six weeks suppuration set in, and was profuse for six weeks, and then cicatrization occurred. From this time his health was good until 1864, when he had a third attack of swelling of the cervical glands in the same position as previously,—on the left side. Suppuration began in ten days, and one fluidounce was discharged every twenty-four hours during one year. Since then this amount has diminished, and at the present time is slight, although the sinus yet remains unhealed. Shortly after this third attack of suppuration he had cough and profuse perspiration, which continued for six months, and has existed at intervals up to date. He has never had a marked chill.

In June, 1866, his abdomen began to enlarge; he became prostrate, and was obliged to give up work. At this time marked jaundice existed. The enlargement of the abdomen steadily increased for one year, when it began to grow hard to the touch and was painless.

In December, 1867, he was attacked with cough, and ex-

pectorated profusely ropy sputa. During this attack he thinks the swelling of his abdomen diminished one-half.

In January, 1868, the abdominal enlargement reappeared, and has been slowly and steadily increasing.

Present state.—Patient presents a thin, anæmic appearance. Complaints of debility. Fingers clubbed; appetite fair; conjunctiva clear; skin dull in appearance. Bowels are normal. The urine has a specific gravity of 1012, and is loaded with albumen; no tube-casts. A sinus left by the cervical adenitis behind the left sterno-cleido-mastoid muscle discharges a small amount of thin sero-purulent matter. The spleen is enlarged. The feet and legs are œdematous. Abdomen is tense, swollen, and hard, and appears to be occupied by a solid mass, extending from a point one and a half inches below umbilicus on right side, and on left side on a level with umbilicus, upwards as high as fourth intercostal space. The tumor rises and falls with the diaphragm in respiration. It presents no evidence of nodulation, and only severe pressure produces any pain. Its anterior inferior edge can be felt through the abdominal parietes, and corresponds in outline with the anterior edge of the liver. Tumor is everywhere dull on percussion.

There has never existed any pain in the right shoulder.

Circumference of chest on line with nipples	31 in.
“ “ one inch below “	32 “
“ “ midway between ensiform cartilage and umbilicus	34 “
“ of abdomen at umbilicus	30¾ “
From symphysis pubis to ensiform cartilage measures	13½ in.
“ right anterior supra-spinous process to ensiform cartilage measures	11½ “
“ left anterior supra-spinous process to ensiform cartilage measures	10 “
“ umbilicus to ensiform cartilage measures	8½ “
Extent of percussion dulness measures on the right side, midway between sternum and axillary region	11 “
Extent of percussion dulness measures on the left side, midway between sternum and axillary region	9 “
Extent of percussion dulness measures on the right side, from fifth rib in axillary region	9½ “
Extent of percussion dulness measures on the left side, from eighth rib in axillary region	4½ “
Extent of percussion dulness measures on the back, from one inch below angle of scapula	8 “

Treatment.—Syr. ferri iodid., gtt. xx, t. d. Ung. ioidid. and belladonna, equal parts, to be rubbed on the tumor.

May 11, 1868.—Discharged at his own request. His condition remains the same as on admission.

September 21, 1869.—The patient presented himself to-day at a public dispensary of which I have charge, to be prescribed for. His general symptoms remain apparently the same, but he thinks that there has been a marked improvement in his condition. He is very anæmic, and has a tendency to epistaxis and to diarrhœa. The liver is of course still enormously enlarged, and extends below the umbilicus. The measurements of the abdomen do not differ materially from those already recorded. The urine is still highly albuminous. He is the subject of an antero-posterior curvature of the upper dorsal vertebrae. This occurred when he was a boy ten years of age, and prevented him from going to school. He complains at the present time of a constant cough, and expectorates a large amount of watery fluid, but a careful examination of the chest shows an entire absence of the signs of phthisis, and that bronchitis exists only in a moderate degree. He was placed upon the use of the iodides and of tonics, with an anodyne cough-mixture.

September 10, 1871.—I was summoned to-day to attend the patient at his own residence. Since the date of the last note, I have repeatedly seen him professionally, but, his condition remaining unaltered, I have not thought it worth while to extend unnecessarily these notes. His mother tells me that he has been doing very well lately,—that although, of course, unfit for hard work, he has been able to earn a moderate sum by running of errands. About a week ago he was treated by his uncle to three drinks. Upon reaching home, he fainted in the yard attached to the house, and was with some difficulty revived. Although able afterwards to leave the house, it was evident to his friends that he had received a severe shock. I found him in bed, breathing with some little

difficulty. His face was slightly swollen, flushed, and rather purplish in hue; his pulse was weak, but only moderately accelerated; his legs were not swollen. The physical signs presented by the abdomen were unaltered, except that there was a slight diminution in all the measurements, and notably so in the extent of dulness in the line of the right nipple. The notch between the two lobes of the liver can be very distinctly felt just above the umbilicus,—a higher point than before noted. Pressure over the hepatic region gives rise to pain, but this is not severe. There are no signs of disease of the lungs, except those occasioned by the effusion of serum into the bronchial tubes. He is somewhat excited mentally, and appears to be convinced that his illness will soon terminate in death. Tonics and anodynes were prescribed.

September 14.—The patient is evidently sinking. Since my last visit he has had another attack of syncope. He breathes with very great difficulty, and is comfortable only when propped up in bed by means of pillows. The physical signs show that there is an increased amount of effusion in the bronchial tubes. The abdomen is distended and tympanitic, probably in consequence of constipation. He is unable to pass his water. His pulse is weaker and more frequent. The heart is acting feebly, but there are no signs of cardiac disease.

I learned from his mother to day that he had several years ago (the exact date she does not recollect, but it must have been anterior to the time he first came under my observation) thrown up a large amount of purulent matter, which was frothy. Treatment continued, with the addition of a purgative.

September 15.—The patient is unconscious, and evidently dying. He has been unable to pass his water freely, but a good deal has dribbled away. Percussion shows that there is some accumulation in the bladder, but, in view of his extreme illness, it is not thought worth while to introduce a catheter. There is at the present time no dropsy of the feet, legs, or face.

Death took place a few minutes after I left his room.

A post-mortem examination was made the next day, twenty-four hours after death, in which I was assisted by Drs. John A. Hunter and George S. Gerhard.

Emaciation extreme. Rigor mortis not marked. The head was not examined. The lower part of the chest was distended by the enlarged liver, especially on the right side. Close adhesions existed on both sides between the two surfaces of the pleuræ. The bronchial tubes were filled with a frothy liquid, but the lungs were not otherwise diseased. The heart was very slightly dilated. Upon laying open the abdominal cavity, the liver was found to occupy a large part of it, extending from the level of the fourth rib above to that of the umbilicus below, and far over into the left hypochondriac region. Its surface presented a slightly granular appearance, reminding one of that presented by the hob-nailed liver. It was connected with the diaphragm and the surrounding organs by loose adhesions, which were very readily ruptured, no firm union existing between any portion of the liver and the diaphragm. Upon the upper and posterior surface of the liver was found a depression which looked a little like a cicatrix, but upon section no cicatricial tissue could be discovered. The lobulus Spigelii was pale in color, resembling bacon in appearance. The kidneys were enlarged, very pale, and, when treated with Lugol's solution, were found to have undergone albuminoid degeneration in a marked degree. The spleen was enlarged to about double its usual size, and on section showed a number of whitish nodules resembling grains of sago. Lugol's solution was applied to the cut surfaces of sections of the liver, spleen, and muscular tissue of the heart, and in all instances the reaction showed the presence of albuminoid degeneration. The bladder was moderately distended with urine. We were not permitted to remove the organs: consequently the weight of the liver cannot be positively stated. It appeared to be about from eight to nine pounds.

Small portions of the viscera were removed for microscopic examination, which showed advanced albuminoid degeneration, especially of the kidneys and liver.

The points of interest in this case are its long continuance, the decrease in the size of the liver which is said

to have taken place after the expectoration of a large amount of frothy purulent matter, and the decrease which was absolutely observed towards the close of the patient's life.

The statement that the swelling had diminished after the expectoration of a large quantity of pus rested entirely on the authority of the patient and of his friends. It is most probable that he was deceived, inasmuch as the autopsy did not justify the opinion that abscess of the liver had ever existed. The deep depression on the upper surface of the liver was not found upon examination to be caused by the contraction of cicatricial tissue, and was probably due to distention of the adjacent parts of the liver from infiltration of the cells by an albuminous substance. There was, moreover, no such firm union of the liver to the diaphragm, or of the right lung to the diaphragm, as would have been found had the contents of a hepatic abscess been expelled through the lungs.

The diagnosis of the case was not difficult. The history of long-continued suppuration, the enormous size of the liver, its uniform enlargement and freedom from nodulation, the non-existence of pain even upon pressure, the characters of the renal secretion, and the length of time the disease had lasted, all seemed to point unmistakably to albuminoid degeneration as the disease under which the patient was suffering.

Although unable to cure the disease, it seemed to me that the patient was benefited by the treatment employed, which consisted chiefly in the administration of the iodides. In other cases which I have had under my care, I have given the alkalies in large doses; but my experience with them is too limited as yet to enable me to form any opinion as to their usefulness in the management of this disease.

OVARIOTOMY SUCCESSFULLY PERFORMED

IN A CHILD SIX YEARS AND EIGHT MONTHS OLD—
DERMOID CYST OF THE RIGHT OVARY.

BY J. EWING MEARS, M.D.,

Philadelphia.

THROUGH the kindness of Dr. T. S. Bradford, of Augusta, Ky., I am permitted to submit the following report of a case of dermoid cyst of the right ovary, occurring in a child aged six years and eight months, in which ovariectomy was successfully performed by Dr. W. B. Barker, of Higginsport, Ohio, in whose practice the case occurred, and to whom I am also indebted for additional information in reference to the duration of the disease and the characters of the cyst.

Dr. Barker reports that he was called, May 13, 1871, to see M. B. J., who was the subject of an abdominal enlargement. She was six years and eight months old, having been born September 1, 1864. No reference was made to any exciting cause of the disease, or to any particular condition of the child's health. The mother states that the enlargement of the abdomen was first noticed in January, 1870. Seven months later she could distinguish a *lump*. The enlargement of the abdomen gradually increased, and at the time of the operation the measurement in circumference was twenty-six inches. Tapping has never been performed. On examination, a freely movable tumor, about the size of a "child's head," could be distinctly felt, occupying chiefly the right side. Regarding it as a favorable case for operation, Dr. B. advised ovariectomy, which was acceded to, and on May 16, assisted by Drs. J. J. Bradford and T. S. Bradford, of Augusta, Ky., he effected the removal of the tumor without difficulty. An in-

cision, seven inches in length, having been made in the linea alba, down to the tumor and its contents, three pints of Catawba-wine-colored fluid were evacuated by the trocar and canula. The cyst was non-adherent and easily removed. It was attached to the right side of the uterus by a pedicle three inches in length. This was ligated and the tumor removed. The incision was closed by sutures and adhesive strips, the ligature of the pedicle being drawn through at the lower portion. Cold-water dressings were applied to the wound, which was covered by a compress and flannel bandage, and the patient was placed in bed.

In nine days the ligature and sutures were removed, and in two weeks and four days the patient was on her feet, recovery taking place without any untoward symptoms.

Character of the cyst.—On opening the cyst, it was found to contain an irregular-shaped osseous mass, some hair, and fatty matter. The bone was attached to the internal surface of the cyst, and resembled in appearance the right superior maxilla. At one point there were projections which resembled teeth; no distinct teeth could be traced. The hair was found attached in part to the lining membrane of the cyst, and loose, in some secondary loculi, which also contained fatty matter. Some of the hairs were four inches in length, and the color was the same as that of the hair on the head of the child. The fatty matter was mostly contained in small secondary cysts; it was granular in character.

Remarks.—The early manifestation of the disease, and the successful termination of the operation instituted at this early period of life for its relief, render this case extremely interesting and its record valuable. With the exception of well-developed teeth, this cyst contained all of the products usually found in dermoid cysts. In size it resembled the ordinary development of these growths, which is, as a rule, much less than that which occurs in cysts containing fluids. The explanation of this is found in the character of the lining membrane of the different cysts. In dropsical cysts the lining membrane is regarded as allied in its nature to serous membrane, and possesses the property of separating the thinner elements of the blood. The only limit, therefore, to the increase in size of these cysts is that which may be offered by the walls of the sac. It is found, however, in these examples that the accumulating fluid is met by a correlative hypertrophy of the walls of the sac, which permits an enormous development, without danger of the occurrence of rupture. In a case recently under my observation, the fluid contents of an ovarian cyst measured sixty pints; and cases are recorded in which seventy and eighty pints have been evacuated at one tapping.

In dermoid cysts the contents possess a higher organization, and their development is limited to their formation. Occasionally they contain a fluid secretion in conjunction with solid contents, and their size approaches that of the dropsical cysts. Farre ("Cyclopædia of Anatomy and Physiology") quotes a case reported by Blumenbach, in which "a girl aged seventeen had a swelling of the left ovary, which, after twenty-one years' growth, measured four ells in circumference and reached below the knees. Death occurred at the age of thirty-eight, when the sac of the ovary alone weighed fourteen pounds, and contained also forty pounds of a thick, fatty, honey-like substance, mixed with short and long hairs, some two feet in length and matted together in locks. Besides these the sac contained bone and well-developed teeth."

The fatty matter found in these growths exists under two forms. It may occur, as in this case, as loose, granular, fatty matter filling up the cavity of the cyst, or contained in smooth-walled sacs in which loose hairs

are imbedded. It may exist as masses developed beneath the lining membrane of the cyst and projecting into the cavity. These masses present the ordinary characters of adipose tissue.

The hair found in dermoid tumors may lie loose in the cavity, or spring from hair-follicles, which can be distinctly traced in the lining membrane. Sometimes the hair attains a considerable length, and in color it usually differs from that of the individual in whom the tumor occurs. In the case under consideration, the hair is reported to have been of the same hue as that of the child. In cases occurring in negroes, the hair is found to differ from the woolly hair of the head, being soft and smooth and of different colors.

Teeth are frequently found associated with hair and fat. They may be developed in the osseous masses, or may take their origin from the wall of the sac. In shape and form they may resemble the incisor, canine, or molar teeth of the deciduous or permanent set. Their intimate structure does not differ materially from that of ordinary teeth, as has been determined by the investigations of Prof. Owen.

The bone contained in dermoid cysts is usually in the form of irregular masses, which bear some resemblance to the superior maxillæ, or to portions of the vertebræ. Sometimes bony masses are found beneath the lining membrane. These appear to be collections of earthy matter, while the former possess true osseous structure.

An interesting question relates to the origin of the solid contents of these cysts. Formerly it was supposed that they were examples of the "fœtus in fœtu," or the products of an imperfect ovarian conception, or, again, examples of extra-uterine gestation taking place in the ovary. The fact that the structures are usually of the same character, hair, bone, teeth, and fat, and that they are more frequently found in one organ,—the ovary,—would seem to exclude the supposition that they are the products of imperfect ovarian conception. The failure to trace any of the peculiar membranes of the ovum, as well as the occurrence of the disease in children, in whom the generative organs are undeveloped, holds equally well against any theory as to their being examples of extra-uterine gestation.

The case under consideration affords conclusive testimony upon this point; and it is, so far as I am able to ascertain, the earliest age at which the disease is noted to have been developed.

The only satisfactory explanation which has yet been offered to account for the development of these structures in ovarian cysts is that relating to the tegumentary character of these growths, and the fact that the contents are chiefly tegumental products.

For the information in reference to the characters of these cysts, I am largely indebted to the valuable article of Dr. Arthur Farre, in the "Cyclopædia of Anatomy and Physiology."

In reference to the age at which the operation of ovariectomy was performed, this case affords an example without parallel, so far as can be determined by examination of a large number of recorded cases.

In the very valuable table of Dr. Washington L. Atlee, embracing all the known operations of ovariectomy from 1701 to 1851, and numbering two hundred and twenty-two cases, the earliest age at which the operation was performed was eighteen years.

The extensive tables prepared by Mr. Clay, of Birmingham, and published as an appendix to his edition of Kiwisch on Diseases of the Ovaries, give sixteen and a half as the earliest age.

Dr. Atlee informs me that in his experience, embracing two hundred and forty-four operations, the youngest age at which he has performed the operation is sixteen years.

I. Baker Brown (on Ovarian Dropsy) reports a case in which partial extirpation of the cyst was accomplished in a girl aged thirteen years.

The *Edinburgh Medical Journal* for November, 1870, contains the report of a case in which the operation was successfully performed by M. Jouon, of Nantes, upon a girl aged twelve years.

It may be remarked that the examination of the tables shows that, in the great majority of cases, the operations performed at early periods of life have given a larger percentage of recoveries than those performed at later periods.

A CASE OF PECTORAL ABSCESS PRESENTING SOME UNUSUAL FEATURES.

BY HARRISON ALLEN, M.D.,

One of the Surgeons to the Philadelphia Hospital.

I. B., male, æt. 55, of German parentage, was admitted to the Philadelphia Hospital, April 10, 1871. No previous history could be elicited, the patient being naturally of dull intellect. He was seriously ill: the tongue was thickly furred. Pulse 130 and weak; respiration 30 per minute. The patient was racked by a distressing cough. Upon examination of the chest from without, a large swelling was observed, extending from the median line to the posterior margin of the axilla, and from the clavicle to the seventh rib. It was divided into two distinct convexities by a sulcus running from about the sterno-clavicular articulation obliquely downwards and outwards. The plane corresponding to the pectoral muscle was flat, while its inferior margin was lost in the beginning of the axillary swelling. The nipple was displaced to the extent of one and a half inches below the line of its fellow of the opposite side. The side of the thorax from the arm to the seventh rib was tense and brawny. A diffused purplish discoloration was seen about the line of the hairs in the axilla.

The presence of coarse moist râles was detected over both sides of the chest posteriorly, and was associated with a free expectoration. The latter aided materially in weakening the patient, since it interfered with his rest.

A striking feature in the case was seen in the relation between the act of coughing and the condition of the abscess. Every powerful expiration caused a sudden abrupt wave to appear at the sternal central portion of the summit of the collection. It was at first thought that empyema was present, and that a fistulous communication existed between the left pleural cavity and the pectoral region. This opinion was soon found to be untenable, since the most careful examination showed no enlargement of the side of the chest, nor were any of the other signs of a collection of pus in the pleural cavity present. Knowing that access of air to the suppurating surface would most probably increase the exhaustion, it was resolved not to open the abscess, but to support the patient, and, by carefully watching his general condition, allow it to stand in the place of an adviser. Should it sustain itself, it would, it was thought, be best not to open the abscess; but should it give any evidence of faltering, it would become necessary at once to evacuate the contents of the collection. Under opiates, beef-tea, milk-punch, and sulphate of quinia, which were freely administered, the patient was made comparatively comfortable. His cough diminished; his pulse sank to 105, and was firmer. By the 16th instant, however, it became evident that the collection was enlarging. The wave-impulse not only increased in volume, but the "squishing" sound of the pus, as it passed to and fro from the thoracic cavity with the act of coughing, could be heard several feet from the patient's bed. It now became evident that the system would sink under the extensive suppuration.

The following day the expectoration became tenacious, closely resembling in its yellow, custard-like appearance that occasioned by the mixture of pus with sputum; and it was suspected that the collection was in part evacuating itself by the air-passage. Such, however, as was ascertained by the subsequent examination, was not the case.

On the evening of the same day, it was resolved to open the abscess. This was done by my resident physician, Dr. Emory Eshelman, who made a small superficial incision at the lowest portion of the collection near the axillary border, and, by the aid of his finger and a pair of dressing-forceps, succeeded in reaching the pus and in emptying the abscess. Fully a quart of thick, purulent matter escaped. No examination of the opening communicating with the interior of the thorax was made, such being considered not only useless but meddlesome. A large compress was placed over its position, however, and firm and equable pressure exerted over the entire left side of the chest. The removal of the pus for the next day caused him much relief; his breathing and circulation became more regular. He soon, however, again rapidly sank, and died on the 19th instant,—the fourteenth day after admission.

Post-mortem.—The abscess was found to correspond in position to the description drawn up before death. The septum noticed dividing it into two parts extended obliquely downwards and outwards, and did not correspond exactly to the division between the sternal and the clavicular portion of the pectoralis major, but occupied a position immediately below this. It actually divided the abscess into two regions, one which might be called subclavicular and axillary, and the other submammary. The first of these had for its floor the pectoralis minor muscle; at its upper portion it sank below its superior border into the subclavian space. Extending across the abscess were several arteries and nerves. The left clavicle was deformed from a badly-treated compound comminuted fracture. The evidences of the lesion were best seen at the middle of the bone. The line of breakage must have been very oblique. The upper—i.e. cervical—surface of the bone was perfectly smooth; the under surface, on the other hand, was very irregular. A large acuminate stalactitic process, having its origin from the anterior margin of the bone by a broad base, descended to the distance of 1" 6". Its extremity rested firmly upon the anterior surface of the first rib, about an inch from its sternal attachment. The costal cartilage of this rib was completely ossified and was much roughened. The second and fourth ribs exhibited evidences of united fracture at about an inch from the edge of its costal cartilage. On the third rib, however, was found an *united* fracture, about half an inch from the distal end of the costal cartilage. It was evident that the pus had communicated with the mediastinum through the space between the fragments. All the costal cartilages were more or less ossified. The inner surfaces of all the ribs involved were covered with a thin layer of recent subperiosteal growth, the result of excitation. Upon removing the sternum, the entire anterior mediastinum was found to be lined with pus-stained granulations. The anterior surface of the pericardium and the median edges of both lungs were agglutinated by similar deposits. Laterally the anterior surface of the upper lobe of the lung of the left side was covered with "lymph" from below its central portion to near the inferior margin. Above the centre, again, and extending thence towards the apex, was found another layer of the same product of inflammation. Elsewhere the pleural cavities were healthy. The lungs were engorged,—i.e. congested. The smaller bronchial tubes were filled with frothy mucus. The lung-tissue was not friable, nor did a section of it sink when placed in water. There was no evidence that the abscess had communicated with the respiratory tract.

Remarks.—The communication of pus between a substernal and a suprasternal space has often been observed in cases of compound comminuted fracture of the sternum, as well as in caries of that bone. In the absence of any evidences of deformity or disease of the sternum, it is fair to conclude that the lesion in the above case was entirely connected with the ribs,—a much rarer condition, and, indeed, so far as the writer can ascertain, unique.

In lieu of a definite history, we may premise that the patient had incurred (when, where, or in what manner, is unknown) simple multiple fractures of the left clavicle and of the second, third, and fourth ribs near their costal extremities. At a time long subsequent to their date of union, a severe concussion is

received upon the anterior surface of the chest near the seat of the primary lesions,—the costal arches now being friable and brittle, and the costal cartilages in part ossified. The deformity of the clavicle is very great, and the normally slight motions of the first costal arch are entirely destroyed. A natural result of the blow, of whatever character it may have been, is to produce fracture. The third rib gives way; an abscess follows. The unusually large dimensions of the abscess find explanation when the extent of the suppurative process as occurring in a man past middle life (who was in all probability of intemperate habits, had been exposed, and, we may take it for granted, neglected) is considered.

The precaution taken in opening the collection after the method recommended by Mr. Hilton was well exemplified. An unguarded plunge of the knife into a cavity across which large branches of the axillary artery (long thoracic and pectoral) were extending, would, beyond a doubt, have caused dangerous hemorrhage.

The bedside notes of the above case were furnished me by Dr. Emory Eshelman, one of the resident physicians of the hospital.

INDUCTION OF PREMATURE LABOR IN A CASE OF CONTRACTED PELVIS.

BY HORACE WILLIAMS, M.D.,

One of the Obstetrical Physicians to the Philadelphia Dispensary.

E. F., æt. 33, is an intelligent mulatto, in comfortable circumstances. Although without apparent deformity of the spine or lower limbs, she presents, in general stature, and particularly in her cranial conformation, decided evidences of early rachitic trouble. Married at 26, her first child was born two years later, without instrumental interference, but after a seventy-two-hour labor, which was undoubtedly premature; since she informs me the child did not cry audibly for two days, and was, moreover, very small. It subsequently developed a marked rickety tendency, and was reared with difficulty. In her second confinement, at term, the forceps were applied high up, after forty-eight hours of labor-pains, the head being only slightly engaged at the superior strait, and little disposed to advance. Prolonged traction brought through a dead child, its head much elongated, and bearing marks of continued pressure, the evident cause of death. Her third accouchement, in June, 1868, was so nearly in every respect a duplicate of the preceding as to call for no special comment. The child's head bore a decided left parietal indentation, caused by the promontory of the sacrum. Catheterization was requisite several days subsequently, and there was partial paralysis of the lower limbs, of several weeks' duration.

In her fourth confinement, in August, 1870, the difficulties seemed to reach a climax. As before, the position was a little transverse from the first of the vertex. After failure of the natural powers, the forceps were applied at the superior strait, and three hours of strong traction were requisite to bring through the head, which was markedly indented on its left parietal aspect. The child, as previously, was still. Much pelvic inflammation followed; catheterization was requisite for ten days, and it was a month and a half before she recovered the use of her lower limbs. Her fifth pregnancy, in 1871, naturally caused some anxious forebodings; and, being consulted, I suggested the propriety of inducing labor at the eighth month, as a procedure affording the best chance for mother and child: the suggestion was assented to. It was apparent that the dystochia in this case arose from a diminution of the conjugate diameter, due to a bending in of the pubic rami, its effect being heightened by the oblique angle at which the pelvis is attached to the spinal column, and doubtless somewhat augmented by a pendulous abdomen. At the termination of the eighth month, reckoning by the method recommended by Dr. Duncan, a flexible catheter was passed

up about six inches between the membranes and the uterine wall,—its introduction being a matter of considerable difficulty, arising from the high position of the uterine tumor, which rested on the brim of the pelvis. The catheter was expelled, after provoking a few pains, and two others subsequently introduced were similarly driven out, while the few pains thus excited died away.

September 21.—Being satisfied of a posterior fundal location of the placenta, a flexible catheter with its stylet was passed nearly to the fundus, the membranes were ruptured, and, the stilet being withdrawn, the catheter was left *in situ*. About four hours later, regular pains, accompanied by dribbling of the liquor amnii, set in, and continued through the day, increasing in frequency and severity. At ten P.M. they had effected little dilatation,—the parts being well lubricated, but the os rigid; opium suppositories were directed at intervals through the night. At four A.M. I was hastily summoned, and found the head on the perineum; the next pain delivered a well-formed, living child, corresponding apparently in age with the time-calculation. The mother and child have since done perfectly well.

Remarks.—The degree of contraction in this case seemed to offer to the operator a choice between the above procedure and the practice so much urged abroad, of podalic version at term. Assuming the septicæmic risks to be the same in both cases, it was thought that the plan detailed offered least violence to both mother and child, and that the contingency of any delay to the after-coming head outweighed the disadvantages of abridged gestation.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

CLINIC OF PROF. AGNEW, SEPTEMBER 6, 1871.

Reported by Dr. Elliott Richardson.

ONYCHIA.

A LITTLE girl, aged 8 years, was suffering from this disease in the thumb of the right hand.

She applied at the surgical dispensary of this institution several weeks since, with a large sloughing ulcer situated on the extremity of the member now affected, which was at that time much swollen and heightened in color. She then stated that she had had a diseased condition of this locality for several months, and that it commenced originally as a felon. Yeast-poultices were directed, which removed the slough and produced a healthy ulcerated surface, and, under the subsequent use of ungt. zinci oxidi, recovery soon followed.

A portion of the matrix had escaped destruction, and soon produced a nail, which, acting as an irritant upon the scarcely-healed ulcer, had produced this condition of onychia.

Prof. Agnew said, in regard to the treatment of this affection, that although tincture of iodine or other alterative remedies might be of advantage for a time, yet the removal of the nail, which acted the part of a foreign body, offered the only prospect of effecting a permanent cure.

While the patient was under the effects of ether, the nail was removed and the matrix destroyed by nitrate of silver. The wound was then dressed with lint saturated with olive oil. This dressing, it was directed, should be retained for two or three days, when the following solution was to be substituted:

R Hydrarg. Chlor. corros., gr. ij;
Aqua, f3j.

EPITHELIOMA.

Situated on the skin, about midway between the axilla and breast of the left side of a woman 37 years of age, was a small red point, exquisitely sensitive, surrounded within a radius of about half an inch by a marked induration or infiltration of the tissues, and showing a tendency to ulcerate, and also to extend over the adjacent surface.

The Professor thought this to be epithelioma, and advised its extirpation by the knife; but, the patient not being prepared for the operation, it was postponed.

DISLOCATION OF THE SHOULDER.

The subject of this injury was a boy, aged 17 years, who had dislocated his shoulder by a fall five weeks previous. The lecturer detailed the numerous symptoms characterizing this condition: the projection of the elbow from the side; the flatness of the shoulder; the prominence of the acromion,—all of which were evident at the first glance. The hollow beneath the acromion process, enabling the finger to be introduced between it and the head of the humerus, and the limited power of motion which the arm possessed, were other symptoms. When the arm was held out at right angles with the body, the back of a hand placed upon it just below the acromion did not project above the level of this process.

These, with the fact that the head of the humerus could be felt in the axilla, moving in response to rotation of the bone, were conclusive evidences of the nature of the injury.

Fracture of the neck of the humerus could not have occurred in this case, for although the five weeks which had elapsed since the receipt of the injury might have sufficed for the firm union of the fragments, yet, if fracture had occurred, a large mass of callus could easily be detected, and the humerus could not have retained the perfectly normal relation to its head which here existed. In recent cases, the presence or absence of crepitus is a decisive point in differential diagnosis. Motion was more limited in this case than in recent luxations, on account of the bands of adhesion which long-continued malposition of the bones forming a joint always gives rise to. These are great in number and strength in proportion to the extent of the injury done to the part at the time of accident. If the contusion has been great, adhesions are often so firm as to render all attempts at reduction fruitless, and even success is not unattended with danger of the rupture of large blood-vessels which may be involved in the inflammatory adhesions. The contusion in this case had been slight, and the prognosis was therefore more favorable than in many luxations of so long a duration. When the head of the humerus is dislocated into the axilla, the muscles attached to it, contracting, soon draw it inwards and upwards immediately beneath the coracoid process, and hold it firmly in that position.

The indications for treatment are, therefore, either to produce general muscular relaxation through the agency of ether or chloroform, or to place the arm in such a position that the contractions of one set of muscles will have the effect of counteracting those of the others, and thus enable the operator, by the application of additional force in the right direction, to bring the humerus into its normal position.

The various methods for accomplishing reduction are all based upon the last-mentioned theory, and may be briefly described as follows: First method. Place the foot or some other object in the axilla, to act as a fulcrum; then, seizing the arm, make extension downwards until the head of the humerus slips into place. Second. Draw the arm, with the elbow flexed at right angles, upwards, so as to be parallel with the axis of the body; then rotate the humerus by drawing the forearm strongly backwards over the head, and while in this position bring the arm rapidly down to the side of the chest, at the same time rotating the humerus inwards and throwing the forearm across the body. Third. Make extension directly outwards while fixing the scapula, with the foot upon the acromion. Fourth. Make extension upwards, fixing the scapula in the same manner as in the third method.

Prof. Agnew said he would not give any one method preference over the rest in all cases. Usually the administration of ether is necessary only in cases of some hours' standing. Ether was then administered, and the luxation reduced without difficulty, by fixing the scapula and drawing the arm upwards, rotating slightly during extension. A Velpeau bandage was then applied. The Professor stated that in the course of two weeks, with the occasional removal of the bandage and the application of judicious passive motion to the joint, the patient would soon have a useful arm, but he would never have as perfect use of the joint as before the dislocation, since, following such injuries, for some time there is always a great liability to the recurrence of the accident.

CLINIC FOR DISEASES OF THE SKIN, OCTOBER 2, 1871. SERVICE OF DR. LOUIS A. DUHRING.

Reported by Dr. Arthur Van Harlingen.

ECZEMA RUBRUM OF LEG.

M. R., aged 67, Irish, and a domestic, was brought before the class for the first time one week ago. At that time she stated that she had always enjoyed good health, and previous to the present trouble had never suffered from any affection of the skin.

The present attack commenced four months ago, since which time the disease has steadily increased.

Dr. Duhring called to the remembrance of the class the appearance of the patient when she first presented herself for treatment. A patch of eruption, about six inches in diameter, extended over the outer surface of the calf of the left leg. It was characterized by the formation of thick brownish-yellow crusts, mixed with dried blood, easily detached, and exhibiting beneath a superficially excoriated surface discharging a yellowish-white fluid which stained and stiffened the stocking; the latter feature being a characteristic of this form of eczema. The surrounding tissues were red, inflamed, and somewhat cedematous, in addition to which a number of varicose veins could be observed.

In order to loosen the crusts, the patient was ordered to cover the diseased part with a thick layer of unguentum diachylon. This dressing was to be retained till the next morning, when she was directed to apply *sapo viridis* in small quantity, rubbing it thoroughly into the leg over the seat of the eruption for five or ten minutes, finally washing it off with tepid water. Then the ointment was again to be applied, spread evenly over strips of linen.

These applications were to be made twice daily, until she again presented herself at the clinic. No internal treatment was ordered.

To-day she reports herself much better, the itching having in a great measure subsided, so that she is now able to get a comfortable night's rest.

The improvement, however, is not so great as might have been expected; and the cause is found in the patient's admission that she has been two days without any ointment.

The lecturer impressed strongly on the class the absolute necessity of continual attention being paid to this class of cases, the neglect of treatment even for a short time being sure to be followed by relapse.

ECZEMA OF EYELID.

C. N., a German, aged 35, and a workman engaged in the manufacture of morphia, presented himself for treatment for the first time three weeks ago. At that time he presented the following appearances:

There was an excoriation the size of a nickel cent on the left eyelid, from which oozed a clear fluid, the lid itself being inflamed, cedematous, and drooping. This excoriation had lasted about four weeks, itched severely, and showed no tendency to spread.

In addition there was a papular and vesicular eruption extending over the forehead around the margin of the hair, which had been in existence about three weeks. There was no history of any venereal disease. The patient was directed to rub the eyelid and forehead thoroughly with *sapo viridis* morning and evening, and after washing the soap off to follow it with an application of diachylon ointment retained in place by bandages. No internal treatment was ordered.

To-day he again appears before the class, and is seen to be greatly improved.

The excoriation is entirely healed up, the eyelid has regained its normal size and appearance, and there is no longer any itching. The eruption on the forehead also is rapidly disappearing; in fact, the man is nearly well.

The lecturer said that he brought this case before the class to-day, both for the purpose of showing the effect of treatment, and also to demonstrate the correctness of the diagnosis which had been made on the patient's first appearance. The class would remember that he had called their attention to the close resemblance which was borne by the sore on the eyelid to an ordinary hard chancre. The extreme rarity of eczema appearing as a circumscribed eruption without any tendency

to spread, in this locality, rendered the diagnosis very interesting.

From the absence of any history of venereal contagion, and from the appearance of the sore itself, the diagnosis of eczema was made, the correctness of which has been verified by the result of treatment.

PRURITUS CUTANEUS.

R. N., a native of Ireland, aged 72 years.

This patient, Dr. Duhring said, the class would remember to have seen on his first appearance at this clinic, two weeks ago. He was at that time a truly pitiable object. He complained of being troubled, as he expressed it, "with a terrible itching;" so incessant and severe was it that he was prevented from sleeping, and had scarcely enjoyed a night's rest for three months past. Upon examination, no primary eruption upon the integument could be observed. There were but few excoriations, and these had been produced by scratching and rubbing.

The itching was confined to the trunk as high as the neck, and to the arms. The patient stated that he had never before had any skin-disease, and expressed himself as being in good health, with the exception of a slight irregularity of the bowels, and the itching for which he sought relief. From these symptoms it was evident that the patient was suffering from pruritus cutaneus. The class would remember that at that time he was ordered an aperient tonic mixture, as well as baths of carbonate of soda, which he was to take twice daily, remaining in the bath twenty minutes.

To-day the patient states that he has employed the treatment ordered, and that he feels himself entirely relieved of the itching. This case, then, is, strictly speaking, pruritus cutaneus, or, as some dermatologists would term it, pruritus senilis. The latter name might give rise to the idea that the disease is peculiar to old people: this, however, is not the case, as it frequently occurs in the young.

The causes of pruritus cutaneus are varied, often depending on very slight derangements of the economy; the treatment, as a rule, being adapted to whatever variation from health may be discovered.

DERMATO-SYPHILIS.

Alex. C., æt. 38, native of this city, and a chairmaker by occupation, came before the class for the first time.

He presented the following appearances. On the face was a semicircular arrangement of tubercles, small in size, just above the upper margin of the mustache. Some of these were covered with a few fine scales. He stated that they had been upon his face about four months, and were unaccompanied by itching. On the outer aspect of the left thigh were three small ulcers covered with dark scabs. These the patient stated had existed about eight weeks. He incidentally referred to having contracted syphilis, and dated the initial lesion six years back. The lecturer, however, called the attention of the class to the necessity of making a correct diagnosis in such cases from the appearances alone, remarking that the history was often misleading and could not be relied upon. The patient was ordered the following prescription:

R Potassii Iodidi, ʒv;
Tr. Cinchonæ comp.,
Syrupi simplicis, aa, fʒij.

Sig.—Teaspoonful three times a day after meals.

The crusts were to be removed from the ulcers by poultices, after which they were to be dressed with unguent. hydrarg. The tubercles demanded no local treatment.

BELLADONNA-POISONING.—In a case of poisoning by belladonna reported by Mr. Caruthers in the *British Medical Journal* of September 16, the following interesting observations were made: Some of the contents of the patient's stomach was applied to the conjunctiva of another patient, likewise some of her urine to another; in both cases rapid dilatation followed. Every day a drop of urine was applied to a healthy conjunctiva; and so long as the patient's pupils continued dilated, for so long was her urine capable of causing dilatation of the subject's pupils; thus showing that the elimination of the poison from the system was coincident with the return of the patient's pupils to their natural state.

PHILADELPHIA HOSPITAL.

SURGICAL CLINIC OF F. F. MAURY, M.D.,

Lecturer on Cutaneous and Venereal Diseases in the Jefferson Medical College, etc.

September 13, 1871.

Reported by Ralph M. Townsend, M.D.

STRICTURE OF THE URETHRA.

THIS patient, when nineteen years of age, suffered from an obstinate attack of gonorrhoea. During his twenty-fourth year he was seized with a like attack, but for the last six years he has remained well, being now thirty years of age. He presents himself at the clinic to-day suffering from stricture of the urethra.

Stricture may be diagnosticated by its many symptoms. Prominent among these are the size of the stream and the impeded or unimpeded flow of water from the urinary bladder. This patient seems unable to start a free flow of urine; but the embarrassment attending the attempt at micturition before a class may account for it. The presence of a stricture is best detected, however, by the passage of an instrument. In doing this, as little pain and jar to the nervous system must be given as possible. This patient has taken quinine for several days past, to prevent any chill that might otherwise follow the manipulation about his urethra. Care should also be exercised about keeping a patient well covered during an operation of this kind, and also after it.

Dr. Maury stated that he had performed this operation thirty-seven times, which was oftener, with a single exception, than it has been performed by any other surgeon in this country.

As a prelude to the operation, the patient's urethra was well injected with olive oil by means of a modified Tieman's urethral syringe. This instrument revealed the presence of a stricture just below the bulbous and anterior to the membranous portion of the urethra. From the spasm the operator felt, it was manifest to him that he had to deal with an irritable stricture. No force, however, should be used in such a case, but, on the contrary, the greatest gentleness and most careful manipulation should be practised.

After the penis had been well injected with the oil, the syringe was withdrawn, and the head of the penis firmly grasped. In the mean time, the man was told to draw his legs up and throw his thighs out; that by so doing he would relax the perineal muscles,—the abdominal muscles being also relaxed by raising the patient's head and shoulders. An attempt was now made to pass a small bougie (Sir Henry Thompson's, No. 6), but it failed to pass through the seat of stricture.

The attention of the class was here called to a peculiar circumstance: whenever the instrument came in contact with the stricture, a peculiar cough was produced. The rationale of this could not be explained, but it was stated to be of frequent occurrence.

The failure of these instruments to pass induced the operator to take the dilator of Mr. Weiss, and, after carefully oiling it, to pass it down to the seat of the constriction. Dr. Maury said he was the first surgeon in Philadelphia to operate with this instrument, in a case which came under his care in 1867. Since that time he has carefully watched the cases operated upon by this method, and has become perfectly familiar with the after-symptoms.

The present case is one not eminently favorable for an operation; but the seat of the stricture is that favorable for the use of the rupture-instrument, being anterior to the triangular ligament. If the stricture be seated posterior to the triangular ligament, this method of operation becomes dangerous, and should not be pursued.

The point of the dilator refusing to pass the stricture, the index-finger of the surgeon's left hand was well oiled and carefully introduced into the rectum, so as to aid the passage of the point of the instrument along the floor of the urethra. This failing to have the desired effect, the rupture-instrument was withdrawn and a Sir Henry Thompson dilator introduced in its stead. This latter instrument was passed through the stricture until its point rested in the prostatic urethra, and the latter was stretched much in the same manner as the finger

of a glove. After the withdrawal of this instrument, the operator passed a No. 6 sound, but it was clasped on its withdrawal at the seat of stricture. This induced the Weiss instrument to be entered the second time, when its point passed the stricture. An assistant now held the penis while the stylet was driven in up to its hilt, thus rupturing the narrowed portion of the channel. Before withdrawing the instrument, it was rotated upon its long axis, and after its withdrawal a No. 10 sound was easily passed into the bladder.

After the operation the man was well wrapped in blankets, given ten grains of quinine, and put to bed. Fifteen minutes afterwards a quarter of a grain of morphia was administered. These remedies should not be given simultaneously, as they are apt to produce nausea.

This man will not be permitted to get out of bed under any circumstances. He will receive mucilaginous drinks, such as barley-water, and no instrument will be introduced into his bladder for three or four days. A month, if everything goes favorably, will make a great change in his condition; but he must exercise constant care, and is always in danger of relapse when he ceases to follow appropriate directions.

September 20.—This patient was again brought before the class, looking haggard and pulled down from the effects of the bursting of his stricture. The operation for stricture is a serious one,—always troublesome and often dangerous,—and the most judicious after-management is required. Care is still being exercised in keeping this patient well protected with blankets.

This man has now a urethritis something like a gonorrhœa, which is a constant concomitant of operations of this kind. It is a gonorrhœa, but it is non-specific; yet if he had intercourse with a woman she would have a similar condition,—not a genuine gonorrhœa, but an irritable condition which strongly resembles that disorder. A man should be told, therefore, after an operation of this kind, to desist from intercourse until the urethra is healed.

A No. 8 sound was now well warmed and oiled, and introduced as far as the point of the stricture. Slight spasm ensued, at the same time revealing a rough, jagged, and semi-cartilaginous condition of the ruptured parts. A larger sound (No. 10) was now introduced,—the smaller instrument having been withdrawn,—and readily entered the bladder. The reason for this is that the sharp point of the smaller instrument pressed directly against the stricture, and the moment it did so spasm resulted, which prevented the instrument from going farther. The tactile sensibility of the operator recognized this condition. The larger instrument, however, dilated the urethra along its whole length, and so gradually overcame the constriction before absolutely reaching it.

When this patient again comes before the class, a No. 12 sound will be passed.

INJURY TO THE CERVICAL VERTEBRÆ.—Dr. Fayrer reports an interesting case of injury to the vertebræ, in the *Indian Medical Gazette* for June 1, 1871. A little girl, 6½ years of age, was taken up by the head and lifted from the bench on which she was sitting to a table distant some feet. The child felt some pain, heard something snap, and found that her head was twisted to one side, and that she could not return it to its natural position. There was considerable mobility, and, considering the nature of the lesion, wonderfully little pain. The head could be rotated in every direction. Considerable flexion and extension were practicable, but the distortion remained, and there was a marked bony prominence, which was believed to be the right lateral process of the sixth or seventh cervical vertebra. She was placed under the influence of chloroform, and a careful examination made, during which it became evident that there was not only dislocation but also fracture of the transverse process; and after returning the parts as nearly as possible to a natural position, it was not deemed prudent to use any further interference, and the child was placed in a recumbent posture, with instructions to keep her so, and support the head on either side with a pillow stuffed with sand. A week after the accident the child was reported to be well and free from pain. A certain amount of distortion, however, remained.

ADDISON'S DISEASE.—Dr. Finlayson reports in the *Glasgow Medical Journal* for August, 1871, a case of this disease. The following is a catalogue of the symptoms in the order of their appearance: Languor, feebleness, and impaired appetite; discoloration of the face, neck, and hands; pains in the back; profound asthænia; occasional vomiting; discoloration of the mucous membrane of the mouth; hiccough; discoloration of fresh portions of the skin; giddiness; mistiness of eyesight; slight diarrhœa; fever; delirium; tremors, unconsciousness, and death. Dr. Coats, who made the microscopical examination, reports that the left capsule is very much larger than the right, weighing one ounce and six drachms. On section, it is seen to be in great part made up of a yellow, cheesy, opaque mass, and this mass is divided chiefly into two portions,—one, about the size of a flattened walnut, at one end of the capsule, and the other, about the size of a hazel-nut, at the other end. The large mass in some parts is pretty firm in consistence, but in other parts it is soft, and presents one or two distinct cavities filled with opaque yellow fluid; these cavities are in its more central parts; but at the periphery, and close under the external wall of the capsule, there is an infiltration of thick, yellow fluid, which has to a certain extent dissected the internal mass from the internal wall. The yellow fluid externally and in the central cavities is found, on microscopic examination, to be pus, whose cells are in an advanced state of fatty degeneration, while pretty abundant free fat-granules float in the fluid. The smaller cheesy mass presents similar central and peripheral collections of degenerate pus. On section for the microscope there is seen to be a thin layer just at the periphery of the organ, which presents the same infiltration with round cells which exists in a much greater area in the right capsule. The cheesy central mass again shows very marked fatty degeneration; and the parts which are fatty are arranged in a somewhat irregular reticulated network, composed chiefly of oil-granules, but in which are interspersed several large brownish irregular bodies, which present some resemblance to the granular bodies that form the main constituent of the normal capsule; but here they are irregularly scattered, and only in rare cases do they show a slight approach to the arrangement in rows. The interstices of the network are much more transparent, and present a few oil-granules, but no apparent structure.

“From the consideration of these microscopical characters, especially the comparison of the condition of the right capsule, where the disease is obviously much more recent, with that of the left, it would appear that the primary process is an extreme infiltration of the entire tissue of the capsules with round cells, and these subsequently undergo fatty degeneration and form the central cheesy mass.” From the microscopical appearance Dr. Coats concludes that the case is one of local tuberculosis of the suprarenal capsules.

ELECTRO-THERAPEUTICS.—Dr. Oskar Berger, of Breslau (*Schmidt's Jahrbücher*, Bd. 151, Nr. 7, 1871; from *Berl. Klin. Wochens.*, viii. 2, 1871), has treated twenty-five patients suffering from tic-douloureux by electricity. In most of the cases the disease was of long standing and other remedies had failed. A large damp disk was attached to the positive pole and applied to the painful part, while the negative pole was placed in any position, but generally on the hand. The constant current, strong enough to cause a moderate amount of pain, was used. Twenty-two of the twenty-five patients were cured by this treatment. A few relapses occurred, but yielded readily to a reapplication of the same treatment. He has found it also useful in other forms of neuralgia. In hemicrania he has found it useless, as he failed to effect a cure in any of the twenty cases in which it was tried, although the points to which the electrodes were applied were constantly changed.

LIGATURE OF THE CAROTID AND SUBCLAVIAN ARTERIES.—Mr. James Lane (*Lancet*, September 23) recently applied ligatures to the right carotid and subclavian arteries in a female patient at St. Mary's Hospital, suffering from an aneurism at the root of the neck, presumed to arise from the innominate artery. This is the third time that simultaneous deligation of these two important vessels has been performed in England, the other operations having been undertaken by Mr. Heath and Mr. Maunder.

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EDITORIAL.

A LEADING newspaper in New York recently took occasion to say that in any controversy between the members of the medical profession and irregular practitioners of medicine it would always be disposed to side with the latter, and gave as a reason for this opinion that many of the most valuable additions to the *materia medica* had been made by these, and that the former had always shown themselves unwilling to accept discoveries without great opposition, and that this was notably true in regard to the discovery of the circulation of the blood by Harvey, and that of vaccination by Jenner. The sentiment is certainly not a generous one, and it is the object of the present editorial to show that it has very little foundation in fact.

In the first place, opposition to the regular profession can scarcely be very intelligent which arrays itself on the side of quackery generally; for there are so many phases of this, and these are often so contradictory, even when, as in the case of homœopathy, many are comprehended under the same name, that, admitting for the sake of argument that we are wrong, and making no allowance for the want of education of our opponents, it must necessarily follow that the majority of them are equally in error. We have often heard the reproach that physicians change their views too readily, and the revolution in medical practice which has taken place within the last century has been frequently assigned as a reason for a want of faith in medical science. We are therefore accused at the same time of holding to old views simply because they are old, and of too great a readiness in adopting new. Neither accusation is just; for the members of the medical profession, while adhering to old theories as long as they are not disproved, and abandoning them, it may be, in some instances with regret, have at least in later times shown as great a readiness as the professors of any other science to subject every asserted improvement to the proper tests before either adopting or rejecting it. We do not believe, moreover, that at any time discoveries met with more opposition from physicians than from others. To take one of the instances to which our critic alludes,—Harvey's discovery of the circulation of the blood. This was publicly taught in the course of lectures delivered by him as Lumleian

lecturer about 1615; but it was not until 1628 that his views were given to the world, in the treatise entitled *Exercitatio Anatomica de Motu Cordis et Sanguinis*, when, we are informed by his biographer, they immediately attracted the attention of all the better intellects among the medical men of Europe. Opposition they certainly did meet with, but this generally came from men who were already committed to other theories, and who had probably arrived at an age when it is not easy to lay aside old convictions. This undoubtedly was the cause of the hostility of Parisanus, Veslingius, and Hofman. Moreover, this opposition seems to have come principally from the Continent, for we learn from the same authority that Harvey had succeeded in winning over to his side all the men of his own country who by their education and acquirements might have been fitted to array themselves against him: his lectures at the College of Physicians had apparently satisfied all his contemporaries. Hofman, towards the close of his life, appears to have made a reluctant avowal of his belief in the correctness of Harvey's views. Another evidence that he was held in high esteem by the eminent men of his day is afforded by the fact that soon after his appointment as Lumleian lecturer he was chosen one of the physicians extraordinary to the reigning monarch, James I.; and he was further guaranteed the reversion of the office of ordinary physician whenever, by death or otherwise, a vacancy should occur,—which, however, did not take place until the reign of Charles I. This connection with the court probably as much as any other cause occasioned the loss of practice which Harvey is said to have suffered soon after the publication of his treatise, although there may have been a few of his former patients and a few physicians who, as John Aubrey tells us, considered him "crackbrained."

Among the contemporaries of Harvey was Galileo; and we need not recall to our readers how bitter was the opposition which greeted the announcement of his opinions, not merely by the authorities of the Roman Church, by whom his opinions were considered heretical, but also by the Aristotelian philosophers of his time. Is it not, then, unfair to speak of the hostility which was manifested by a few, and for a short time, towards Harvey as an evidence of the want of liberality of physicians, who were then, as they are now, as enlightened as any other class of educated men?

The case of Jenner is perhaps even more strongly in our favor. At a very early period of his professional career he appears to have become convinced that the cow-pock, if successfully inoculated, would afford protection to man from smallpox. He certainly did not receive much encouragement to proceed with his investigation from his fellow-physicians, although there were some exceptions to this rule, and John Hunter was among them; and it was some time before he had an opportunity of putting his views to the test of experiment. On the 14th of May, 1796, he vaccinated a boy aged 8, who is said to have passed successfully through the various stages of the disease. Two years later he published his first memoir on the

subject, entitled *An Inquiry into the Causes and Effects of Variola Vaccinae*. The practice of vaccination met with a good deal of opposition and some little ridicule, but in less than three years after the first successful operation, and in less than one after the publication of his memoir, seventy of the principal physicians and surgeons of London signed a declaration of their entire confidence in it; in the following year he was presented with a medal by the Physicians and Surgeons of the Royal Navy, and he was subsequently elected a member of several learned societies; and we learn from Baron's Life of Jenner that

"Among the many marks of public approbation and respect which were presented to Dr. Jenner at this period of his philanthropic career, none afforded him higher gratification than those offered to his fame by his professional brethren; inasmuch as these were the best testimonials of his merit as a discoverer, and of the greatness and universal advantage of the discovery itself. He was in the early part of this year, 1802, addressed on that subject in the warmest terms of congratulation and approval by the Medical Society of London, of which he had long been a member. At a full meeting, held on the 29th of March, it was unanimously resolved, 'That, taking into consideration the important discovery of Dr. Jenner, the members of this society are of the opinion that great benefit will accrue to the inhabitants of these islands, and to mankind in general, from the introduction of vaccine inoculation; and from their own experience, as well as from the extensive trials made in various parts of the world, that it will, in all probability, ultimately eradicate smallpox, one of the most fatal diseases to which the human species is liable.'"

It was not until some months later that he was voted by Parliament the sum of £10,000, which was afterwards increased, partly in recognition of his merit as the discoverer of so great a boon to the human race, and partly as some compensation for the expense incurred and the time spent in bringing it to public notice. Several physicians willingly gave testimony in favor of the grant; and soon after the debate in Parliament, Dr. Lettsom wrote as follows:

"I was truly chagrined on seeing the niggardly reward voted by the House; and had double that sum been asked, it would have been granted. However, as an individual, I am not disposed to let the matter rest here, but immediately to set on foot a subscription that should invite every potentate and person in Europe, America, and Asia, because every avenue of the globe has received, or may receive, your life-preserving discovery. This subscription should not be for you, but it should be a fund, the interest of which should be forever devoted to the name of Jenner."

Baron tells us that

"These liberal sentiments were generally shared by almost every respectable professional man in the kingdom; and at a future time they were adopted by the nation at large, through the medium of their representatives. Dr. Pearson alone, I believe, opposed the general feeling."

When we consider the repugnance to vaccination which is manifested by many even at the present day, we can scarcely accuse the physicians of the close of the last century and of the beginning of this of an un-

reasoning opposition in having waited for some demonstration of the truth of Jenner's assertions before being willing to subject those who were committed to their care to the operation; and it is also to be remembered that not merely was the prejudice which the physician himself might entertain to be overcome, but also that of his patients.

Passing now to the consideration of the additions made to the materia medica by irregular practitioners, these are believed to be very few; in fact, it would be difficult to name any really valuable drug a knowledge of the therapeutic properties of which has been acquired solely in this way. We shall, no doubt, be met by the assertion that the properties of cinchona were known to the aborigines of South America, and by them revealed to the early Spanish settlers, by whom they were communicated to the government of Spain, and that the Countess del Cinchon had much to do with the introduction of the medicine into Europe. It is, moreover, true that there were some physicians who were adverse to its use; but, if we carefully consider its history, we shall find that the opposition to its use arose quite as much from religious as from professional intolerance. Among the most active in bringing it into general notice was Juan de Lugo, a Jesuit, from whom it derived its then popular name of Jesuits' bark. This arrayed the Protestants against it, who opposed its introduction simply on this ground; and hence it is that physicians were so long in discovering and profiting by the valuable properties of this drug.

Need we remind our readers how many valuable remedies have been placed within our reach by the patient observation of physicians, and how freely the valuable additions made by the chemist to the list of the materia medica have been applied to the cure of disease, until it would really seem that the reproach might be made with more justice that we are too much inclined "to prove all things," too little "to hold fast that which is good"?

THE IMPORTANCE OF REVACCINATION.

WE are glad to see that the Board of Education of the First District in this State has directed the Principals of the Public Schools in this city to enforce rigidly its rule concerning vaccination, which provides that no child who has not been vaccinated shall be admitted or continued as a pupil in any school. We regret that it has not gone further, and directed that every pupil who has reached the age of puberty shall be revaccinated. There is no question that there is a tendency to the progressive weakening of the protective power of the vaccine disease by lapse of time, and that individuals become again susceptible to the vaccine disease. Dr. Ballard, the author of a prize essay on vaccination, and Dr. Seaton, the author of "A Handbook of Vaccination," have reached the same conclusion, and we shall therefore quote only what the first-named writer says on this point:

"Considering the progressive loss of protection imparted by infant vaccination in a proportion of vaccinated persons, and the impossibility of distinguishing between those in whom it has and those in whom it has not occurred, and also considering that a large number of persons are more or less endangered by the return of capability for developing the smallpox virus, and considering further the special liability to smallpox during the years immediately following the establishment of puberty, revaccination is to be strongly recommended for all persons at the age of about sixteen years. Such persons so vaccinated may be regarded as permanently protected, and there is no occasion for any further repetition of the process."

In regard to another point on which the popular mind is very much disturbed, the inoculation of syphilis by vaccination, Dr. Ballard says,—and Dr. Seaton holds the same opinion,—

"That, although it cannot be denied that such a danger exists, it is one the practical bearing of which has been very much exaggerated. It is a danger practically insignificant, and there is no reason whatever to believe that it exists to such an extent as to detract from the value of arm-to-arm vaccination, as a popular practice of general applicability; and, even were the danger greater than it actually is, the adoption of a few simple precautions on the part of the vaccinator would render the inoculation of syphilis in vaccination almost an impossible event."

CHICAGO MEDICAL STUDENTS.

A GRATIFYING evidence of the good feeling which exists among the faculties of the different medical colleges throughout the United States is afforded by the action of Dr. Rogers and of Dr. Rand, the deans respectively of the Medical Department of the University of Pennsylvania and of the Jefferson Medical College, in telegraphing to the deans of the Chicago Colleges that the institutions of which they are officers would gladly receive free of charge all students of these colleges. The members of the medical profession have not, as a rule, the means to contribute pecuniarily to the relief of the sufferers by the recent fire; and we are glad, therefore, that the faculties of our colleges have come forward in a way which, while it indemnifies a very large and deserving class for their loss, must show our brethren in Chicago how sincere is the sympathy which the physicians of Philadelphia feel for them.

Since writing the above, we have learned that there will be no interruption to medical teaching in Chicago, and that a committee of physicians has been appointed to solicit contributions from members of the profession for the sufferers by the fire. From a correspondent we learn that in Brooklyn a little more than a thousand dollars in currency has been collected by a committee of the Medical Society of the County of Kings, which is to be applied exclusively to the relief of members of the profession in Chicago, and that Dr. Delaskie Miller, of Chicago, is the proper person to whom to send sums of money intended for that purpose.

EXTRACTS.

[From the Journal of the Franklin Institute, August, 1870.]

CHEMICAL THEORIES.

BY B. HOWARD RAND, M.D.,

Professor of Chemistry in the Jefferson Medical College.

IN the June number of the *Journal* is a communication from Prof. Albert R. Leeds, in which he says, in regard to the so-called dualistic and unitary theories in chemistry, "The few who cling to their ancient beliefs have ceased to defend them, and only plead the inaptitude of old age, or the bias of early education, in defence of their loyalty. But now that the unitary theory has prevailed, it is intolerable," etc.

Inasmuch as some chemists not without note, including Bunsen, Berthelot, Fremy, Bloxam, Taylor, and Fresenius, still "cling to their ancient beliefs," and as a very good defence of the same may be found in Brande and Taylor's *Chemistry*, or in Bloxam's latest edition, it seems that the subject is fairly open to discussion.

The facts of chemistry are ascertained by experiment: no theory can alter them in the least. Theory is merely a convenient method of arranging the facts and aiding the memory. We have two theories in electricity,—the one-fluid and the two-fluid theory. Either is convenient in explaining the phenomena; yet I think that no one believes at the present day that electricity is a fluid. The language is retained, for convenience, to be abandoned when we learn more of the true nature of the agent.

Chemistry gives us, by analysis and synthesis, the percentage composition of a body,—that is, the elements entering in it, and the proportions in which they are combined; more than this it cannot do. Knowing the percentage composition of a body, or its *empirical* formula, we conjecture as to the arrangement of the constituents, and make what may be called the *rational* formula. It does not alter the nature or properties of sulphuric acid that we write its formula HO SO_3 , or H SO_4 , or $\text{HO}_2 \text{ SO}_2$, or $\text{HO}_3 \text{ SO}$, or $\text{O}_4 \text{ HS}$, etc.; nor do we know, nor shall we ever know, the true arrangement of the elements in other than the simplest binary compounds. Hence we have a right to take any view which will most easily classify our facts.

Let us consider a single example. Potassium and oxygen unite to form a compound which, when combined with the elements of water, has been called caustic potassa. Sulphur and oxygen unite to form, among other compounds, sulphuric acid, which, when combined with the elements of water, forms the well-known oil of vitriol. These are plain facts, the result of experiment. If we mix these bodies in proper proportion, a compound is formed, the sulphate of potassa or "potassic sulphate." The "old" theory simply supposes that the acid united with the base, the water of each being eliminated. This may be true, or it may not, but no one can tell. It is a simple view, and has the advantage of being easily comprehended and of aiding the memory.

If we take the formula for alum, we shall see still more clearly the advantage of the old system in aiding the memory. We suppose that the sulphate of potassa above mentioned, KO SO_3 , unites with another sulphate, say of alumina, $\text{Al}_2\text{O}_3 \cdot 3 \text{ SO}_3$, and that the two combine, and, in crystallizing, take up twenty-four equivalents of water. The student readily comprehends this, and can easily remember the method of manufacture and the constitution of the compound. Its apparently long formula, $\text{KO SO}_3 + \text{Al}_2\text{O}_3 \cdot 3 \text{ SO}_3 + 24 \text{ HO}$, thus becomes easy. He can then be shown

how it is possible to replace the potassa with soda, ammonia, etc., and the alumina by other sesquioxides, still retaining the type and crystalline form of the original.

Thus: $\text{KO}, \text{SO}_3 + \text{Al}_2\text{O}_3, 3 \text{SO}_3 + 24 \text{HO}.$

NaO	Mn_2O_3
NH_4O	Cr_2O_3
CsO	Fe_2O_3
RbO	
TiO	
AgO	

If we take the unitary formula, these advantages are in great part lost. Thus, in Fownes' Chemistry, the formula for alum is given as $(\text{SO}_4)_2 \text{Al}''' \text{K} \cdot 12 \text{OH}_2$, while that of the "aluminium sulphate" or sulphate of alumina, which is absolutely put into the salt in its manufacture, is $(\text{SO}_4)_3 \text{Al}''' \cdot 18 \text{OH}_2$. How is the student to remember such formulæ, and how is he to account for the change which "aluminium sulphate" undergoes when simply crystallized in company with "potassic sulphate"? Certainly the older formulæ are quite as reasonable as these.

Since the time of Lavoisier the balance has been the test of chemical truth. By its aid the equivalents of the elements have been determined, and for years the simple and natural method of taking the combining weights of bodies for comparison was followed. Since the introduction of "molecular" weights, as might be supposed, there has been "a most admir'd disorder." Each chemist may assume molecules according to his own theory, and the whole notation and nomenclature of chemistry is thus shifting constantly. The July number of the *Journal* contains some analyses of minerals, by Prof. Leeds. His formulæ for the silica, alumina, etc. are as follows: $\text{SiO}_2, \text{Al}_2\text{O}_3, \text{Fe}_2\text{O}_3, \text{MgO}, \text{CaO}, \text{Na}_2\text{O}, \text{K}_2\text{O}, \text{H}_2\text{O}$, evidently unitary formulæ, as shown by the $\text{Na}_2\text{O}, \text{K}_2\text{O}, \text{H}_2\text{O}$. In the *Verhandlungen des Naturhistorisch-Medizinischen Vereins zu Heidelberg* is given an analysis, by Prof. C. W. C. Fuchs, of a clay, the paper having been read March 4, 1870. His formulæ are $\text{SiO}_2, \text{Al}_2\text{O}_3, \text{FeO}_3, \text{H}_2\text{O}, \text{CaO}, \text{MgO}, \text{K}_2\text{O}, \text{Na}_2\text{O}$. Which of the discordant formulæ is the unitary one? It would be easy to multiply instances from the books and papers in which the so-called molecular formulæ are found. It would seem that these theorists are like Burke's "architects of ruin," attempting to pull down and destroy, but effecting nothing solid in return.

Still more unfortunate is the disregard of facts by the enthusiastic unitarians. When the facts do not agree with the theory, "so much the worse for the facts." Without attempting to go over the ground of equivalent volumes, which is full of instances, I merely take their theory of the formation of salts.

The "ancient" dogma was that "a salt is formed by the union of an acid with a base, or of a halogen body with a metal." This is simple fact; whether the acid and base remain as such in the compound is not known, nor is it material. It is convenient to suppose that they do. The unitary theorists assume—first, that an acid is a compound containing hydrogen, the whole or part of which is displaceable by a metal. Second, that a salt is a compound derived from an acid by the displacement of the hydrogen by a metal. This includes the simple theory of Davy, that the hydrated acids should be looked upon as compounds of hydrogen with an unknown electro-positive body formed by adding the oxygen of the base to the dry acid, and the more complex water-type theory of salts. Neither is in accordance with known facts. We can reasonably enough write $\text{H SO}_4, \text{K SO}_4$, etc., although SO_4 is unknown, because it is not new to assume the existence of a non-isolable body; for instance, that of ferrocyanogen. There are, however, facts which cannot be

ignored, and there are considerations which render this view quite untenable. Thus:

1. Certain acids, as $\text{CO}_2, \text{AsO}_3, \text{CrO}_3, \text{SO}_2$ (at common temperatures), do not combine with water; hence they cannot truly be written $\text{H CO}_3, \text{H AsO}_4$, etc.: yet they are so written in unitary works.

2. We have well-marked sulphur-acids, which certainly do not contain replaceable hydrogen.

3. This view compels us to suppose in the bichromates, bicarbonates, etc., distinct and wholly different acids from those in the monosalts, which experiment does not show to be true. Thus, $\text{Na CO}_3, \text{Na H C}_2\text{O}_6; \text{K CrO}_4, \text{K Cr}_2\text{O}_7$, and even $\text{K Cr}_3\text{O}_{10}$. We are also compelled to admit that the phosphoric acid in the meta-, pyro-, and ortho-phosphoric acid is not the same, but that there are in these bodies substances as distinct as are sulphurous and sulphuric acid. Thus, $\text{H P}_6\text{O}, \text{H}_5\text{PO}_7, \text{H}_3\text{PO}_8$. This is altogether contradicted by the properties of the acid, the characters of its salts, and the facility with which they assume and part with the elements of water, being thereby transformed the one into the other. The many other objections in point of fact and reason need not be stated. The type theory, so well suited to the study of the complex, and therefore elastic, substitution compounds of organic chemistry, is ill adapted to the simpler and less flexible bodies, generally included under the head of inorganic chemistry. Thus, to represent the pyrophosphates, we must assume four molecules of water as the type; thus

(using molecular symbols), $\frac{\text{H}_4}{\text{H}_4} \Theta_4$. Then "pyrophosphate of sodium" would be $\frac{\text{Na}_4}{(\text{P}_2\text{O}_3)'''} \Theta_4$, and "acid phosphate of sodium" $\frac{\text{Na}_4\text{H}_2}{(\text{P}_2\text{O}_3)'''} \Theta_4$. (*Bloxam's Chemistry*, p. 256.)

What a contrast to the simplicity of the "ancient" formula, $2 \text{NaO}, \text{PO}_5; \text{NaO}, \text{HO}, \text{PO}_5$! What is gained by the change?

It is not necessary to add more. I only wish to show that there are reasonable grounds for holding certain theoretical views which are by some believed to be accordant with facts, and certainly much more simple than those by which it is sought to replace them.

CORRESPONDENCE.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

SIR,—I noticed a day or two since in one of the newspapers a statement that, at the suggestion of the Pennsylvania Railroad Company, the vaccine physicians either have been, or are to be, ordered by the Board of Health to attend, on a certain day, at the depots of the various railroads running out of the city, for the purpose of vaccinating their employes.

Perhaps there is some mistake about this. If not, it seems to me a most unjustifiable demand upon gentlemen appointed by the city to vaccinate, at a small rate of compensation, the poor. Surely the railroad companies can afford to pay physicians—and to pay them a fair fee, too—for such a service; and they ought not to ask for an extension to them of any public charity. I trust the vaccine physicians will decline to be thus imposed upon, and that the entire profession of Philadelphia will sustain them in so doing.

Yours respectfully,

October 18, 1871.

P.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY, SEPTEMBER 28, 1871.

THE PRESIDENT, DR. JOHN ASHHURST, JR., in the chair.

DR. MEARS presented a portion of the *angle and body of the inferior maxilla*, which he had removed by internal incision from a woman, aged 28, at the surgical clinic of the Pennsylvania College of Dental Surgery. Nine months since, the patient had an attack of periostitis, involving the bone about the region of the last two molar teeth, which were carious. About a month after the attack, suppuration ensued, causing the discharge of very offensive pus into the mouth, and eventually abscesses pointed in the neck below the jaw. The teeth were extracted, and the bone was found to be diseased. Three months since, an attempt was made to remove the necrosed bone by an external incision. At that time it was not sufficiently detached to permit of its removal. During the first three months of the attack the jaws were firmly closed, and the side of the face very much swollen. The patient gives a syphilitic history.

In reply to a question of Dr. KEEN, Dr. M. said he thought the partial ankylosis had resulted from inflammation extending from the masseter muscle to the structures surrounding the joint. He also stated that there was less difficulty in this respect since the operation.

DR. JOHN ASHHURST, JR., exhibited the *specimens from a case of excision of the hip-joint*, including the os innominatum and upper portion of the femur, the lungs, heart, kidneys, and a portion of the liver, from a patient who had died at the Children's Hospital on September 27, nearly a year after the operation of coxo-femoral excision for hip-disease.

The patient, a strumous-looking boy, nine years old, came under Dr. Ashhurst's care in the summer of 1870, suffering with hip-disease of the femoral variety, which had advanced to the third stage: there were two sinuses, one on the front and the other on the back of the thigh, and the patient was gradually failing from the exhaustion produced by continued suppuration. Excision was performed on Oct. 14, 1870, the head and neck of the femur and the necrosed rim of the acetabulum being removed. The caput femoris was reduced to a small nodule, and the neck of the bone had undergone the change in shape which characterizes the advanced stages of hip-disease.

The patient did well for a good while after the operation, in January, 1871, was able to get up, and in February could walk with a single crutch and a high-soled shoe. During the ensuing summer, however, he was very much prostrated by repeated attacks of diarrhoea, and it became evident that bone-disease had returned at the site of excision. After having been taken from the hospital for a fortnight, by his parents, he was brought back in the early part of the present month (September), in an obviously hopeless condition.

A week or ten days before death, the excision-wound, which had never entirely healed, reopened to its full extent, and the sawn extremity of the femur, covered with pale and close-set granulations, protruded. The diarrhoea persisted more or less continuously, and the emaciation during the latter periods of life was extreme. The wound became gangrenous the day before death.

An autopsy was made by the house-surgeon, Dr. Valdivieso, some eight or ten hours after death, when the following lesions were observed:

Hip.—The os innominatum was slightly roughened above and at the position of the acetabulum; the extremity of the femur was exposed and carious, and the remains of its periosteal covering discolored as if from incipient sloughing.

Chest.—Both lungs, but particularly the right, were studded with tubercle, which in the upper lobes on each side had advanced to the stage of softening. The left pleura was firmly adherent to the thoracic parietes. The heart contained both currant-jelly and fibrinous coagula.

Abdomen.—The stomach was much enlarged; the liver

was enlarged, pale, and apparently fatty; the spleen was much enlarged; the left kidney was atrophied, and the right much enlarged, pale, and fatty, and containing one or two masses of yellow caseous matter.

In reply to a question of Dr. MEARS, Dr. A. stated that recovery after this operation had actually occurred at an age beyond 50, but such a favorable result in adult life was very rare. Beyond 30 years of age, Dr. ASHHURST said, the mortality had been 88 per cent. of terminated cases.

Dr. J. H. HUTCHINSON presented the specimens from a case of *amyloid disease of the liver*, for a full account of which see original communication in the current number of the *Times*.

REVIEWS AND BOOK NOTICES.

THE FEDERAL GOVERNMENT: ITS OFFICERS AND THEIR DUTIES. By RANSOM H. GILLET, formerly Member of Congress, etc. 12mo, pp. viii., 444. New York, Woolworth, Ainsworth & Co., 1871.

Upon receiving the above work, we were somewhat non-plussed at the oddity of the situation. The book seemed so out of place—so malapropos to the subjects usually treated in a medical journal—that we suspected some mistake had been made.

On reflection, however, the purely American side of practice of physic became so apparent, that we were disposed to view the work in a different light, and have come to regard it as a godsend to the great mass of practitioners.

Not as physicians, but as intelligent men engaged in politics, hundreds of our country doctors stand in need of just such a concise, clear statement of governmental organization as is afforded by this book. The physician is a man of importance in the community, and is expected to know all things, as well as to do, and much oftener to suffer, all things, and therefore he welcomes all sources of knowledge on every variety of subject.

We are happy to state that this work is the production of a skilful lawyer, and is brief, well written, and very readable.

HANDY BOOK OF THE TREATMENT OF WOMEN'S AND CHILDREN'S DISEASES according to the Vienna Medical School, with Prescriptions. By DR. EMIL DILLONBERGER. Translated from the Second German Edition by PATRICK NICOL, M.B. 12mo. Philadelphia, Lindsay & Blakiston, 1871.

This little work is one of the numerous aids to knowledge which do so much harm to the medical student. Physicians do not require it, and students will be more benefited by practical instruction in the subjects of which it treats. But as an example of Continental practice, it is a fair representative of the treatment which is there in vogue, and which may be described as the rationalistic method: except, however, for the purpose of showing us what is being done in Germany, it is of little value.

The large number of prescriptions intercalated with the text should be taken as an insult by every well-educated practitioner, since they intimate that the reader is unacquainted with the veriest rudiments of pharmacy. On the whole, comparing this little volume with the treatises of Scanzoni, Simpson, Meigs and Pepper, Rilliet and Barthez, we would reiterate our conviction that such books as this one are of no use to intelligent men, and that others may just as well be without them.

THE PHYSIOLOGICAL ACTION AND THERAPEUTIC USE OF CHLORAL. By J. B. ANDREWS, M.D., Assistant Physician to the New York State Lunatic Asylum. Reprinted from the *American Journal of Insanity* for July, 1871. Pamphlet, 8vo, pp. 24. Utica, N.Y., 1871.

From the results of several experiments with chloral upon different persons, and aided by the sphygmograph, Dr. Andrews concludes "that—1. The effect of chloral is to reduce the number of pulsations. 2. That the primary action is to increase the force of the heart's action and arterial tension.

3. That in large doses within safe limits the pulsations are not reduced in number proportionately to the size of the dose, but the effect is more prolonged. 4. That the secondary effect is to diminish the force of the heart's action and the arterial tension."

These results are identical with those produced by nearly all sedatives, excepting perhaps veratrum viride and bromide of potassium; but the hypnotic employment of chloral has many advantages over all other methods of inducing sleep. These may be condensed into the aphorism that chloral produces no after-effects, except (and this is important) in cases of cardiac debility. We have personally experienced its paralyzing action upon the heart on more than one occasion, when recovering from an attack of pericarditis and endocarditis, from which our life was only saved by the free use of diffusible stimulants. As the dose in our case at no time exceeded fifteen grains, and since other observers have noticed the same result in other cases, we are surprised that Dr. Andrews does not speak of the danger of its use in cardiac affections. However, such an oversight may be accounted for. Dr. Andrews bears witness to the value of chloral in insanity, which appears to be his specialty, and is fully convinced of its virtue as a hypnotic in all cases of either an acute or a chronic character. The amount given varied from fifteen to sixty grains three times a day, administered in ice-water or milk-punch.

ESSAY ON GROWTHS IN THE LARYNX: with Reports and an Analysis of One Hundred Consecutive Cases treated by the Author. By MORELL MACKENZIE, M.D., M.R.C.P., etc. 8vo, pp. 263. Philadelphia, Lindsay & Blakiston, 1871.

Twelve active years in the advancement of laryngeal pathology and therapeutics have elapsed since the epoch of Czermak's introduction of the laryngoscope to the profession. During this period a great many instruments and various operative procedures for the removal of laryngeal growths have been suggested and warmly recommended by their inventors, and in turn condemned by others. The unrivalled clinical facilities afforded by the London Hospital for Diseases of the Throat, and the experience of an extensive private practice, have given Mr. Mackenzie abundant opportunities for thoroughly and practically testing these various methods, and have enabled him to decide impartially, *pro* and *con.*, as regards their respective values.

It has been in the removal of laryngeal growths and obstructions that laryngoscopic surgery has hitherto promised to achieve its most brilliant triumphs. Nor do the results of the cases treated by the author and others fail to indicate that our most sanguine expectations are being realized. Of the one hundred cases, the greater part of whom were laboring with aphonia, dyspnoea, and even dysphagia, ninety-five were operated upon, of which seventy-seven were cured and eighteen improved; showing that a majority of such cases are susceptible of cure or amelioration.

Mr. Mackenzie considers "chronic congestion of the mucous membrane of the larynx, by far above all other causes, the most important etiological feature of simple morbid growths in the larynx. Inspiration of irritating vapors and particles of matter, occupations requiring the use of the voice out of doors, exert influences favorable to their production. The occurrence of twice the number of laryngeal tumors with the male sex, as compared with the female," is partly attributed to the fact that, "from the nature of their occupation, men are more exposed to the causes of chronic hyperæmia." The middle period of life appears most favorable to the development of these neoplasms; twenty-eight per cent. were those of persons between the ages of forty and fifty.

From this work the author has excluded the consideration of any malignant tumors or of so-called false excrescences. His classification of the benign neoplasms embraces "papillomata, benign epithelial growths, fibromata, fibro-cellular growths, myxomata, lipomata, fasciculated sarcomata, cystic growths, and angiomas."

The last and decidedly the best section of the book is upon treatment. It is especially commendable for the perspicuity and fairness with which it discusses the comparative merits of the different operations and instruments. Mr. Mackenzie's experiences with the galvanic cautery are "that it is difficult

to limit in its caustic action, and, in addition to the inconveniences that it causes to the patient, it also gives a great deal of trouble to the practitioner." As to topical anæsthetics, he says, "I have never found them of the least use, and some are even dangerous in their effects." Mr. Mackenzie has found forceps, of various constructions, the most useful instruments for the evulsion of growths; but he admits that much depends upon habit, and an operator is apt to give undue credit to that instrument which he is most accustomed to use.

The Appendix, with its protocol of the cases treated by the author and others, will no doubt prove of interest to the profession.

The work throughout is illustrated with finely-executed and accurate laryngoscopic drawings; the same, however, does not always hold good in regard to the microscopic representations. Who, without the aid of the explanatory notes, would detect in Fig. 8, Plate I., the "laminated capsule" or pearl globe of an epithelioma?

This is certainly the *chef-d'œuvre* of Mr. Mackenzie's productions. It is a valuable addition to the English medical literature on this special department. It will bear a favorable comparison with the more pretentious works of Türk or Brung, and cannot fail of general acceptance and favor among the profession.

ON BONE-SETTING (so called), and its Relations to the Treatment of Joints crippled by Injury, Rheumatism, Inflammation, etc. By WHARTON P. HOOD, M.D., M.R.C.S. London and New York, Macmillan & Co., 1871.

This little volume would be worthy of a place in the physician's library were it to fill therein no higher place than that of a piece of clever writing devoted to the description of a phase of medical life hitherto without a literature. The fame of the bone-setter, sustained by word of mouth of his followers, is little dependent upon the lustre of the printed page. It has, in consequence, come to the practitioner somewhat dimmed and blurred by the medium through which it passed, and, like the moonshine cures of old women, has been laughed at if noticed at all. It is a mannerism of sagacity, obtained after much experience, that nothing a patient may say about a medical subject can be believed. "It is the old story of knave and fool," is the comment. "It is too idle to consider seriously." But the profession has—or at least, we hope, will—come to believe that bone-setting is no exception to the rule that in every error there lies concealed a grain of truth; and we are thankful to Mr. Hood for digging out that precious particle, in the instance of bone-setting, and presenting it for our benefit.

It will be seen, therefore, that our author would be ill satisfied were his work to be considered merely entertaining. He designs to give the rationale of the practice of "bone-setting," so called, to claim for it a position in the treatment of neglected sprains and minor degrees of false ankylosis, and, what is of the greatest importance, to assert as a principle that a part whose normal function is motion cannot, *ceteris paribus*, be placed in the most favorable conditions for recovery by long-continued rest.

Mr. Hood informs us of the manner in which he obtained the necessary knowledge to make such an exposition. It appears that a well-known bone-setter of England, by the name of Hutton, in return for kindness received at the hands of the father of the author, Dr. Peter Hood, offered to explain to him all the details of the practice. Dr. Hood declined the offer, which, however, was accepted by his son, who thus became initiated into the mysteries of the craft, and, upon the death of Mr. Hutton, feeling himself relieved from any obligation of secrecy, published in successive numbers of the London *Lancet* a full account of the process. These papers, having attracted some attention, are now collected in book-form, and appropriately illustrated with seven full-page wood-cuts in explanation of the various manipulations. Judging from the cases which came under the notice of Mr. Hood, and from those obtained from other reliable sources, it is not surprising that the bone-setter attained much local notoriety oftentimes at the expense of men of great distinction in the profession. Mr. Hutton speaks of "cases in which some of the best skill of surgeons has been at fault, and in which speedy relief has been given by the proceedings of a

quack." A joint said to be weakened, and for which a variety of ointments and mechanical supports, or absolute rest of the part, or the long-continued use of sedative lotions, have been from time to time prescribed, while the duration of the trouble extends over months, and in some cases years, is seen at last by the bone-setter, who, promptly seeking for the tender spot, which it is asserted is always to be found somewhere about the affected joint, presses upon it firmly, while the limb is forcibly flexed. The patient is then directed to use the limb henceforward, and the case is dismissed, oftentimes entirely cured. In a word, a neglected false ankylosis has been detected and cured by breaking up the adhesions.

The constancy with which the tender spot occurs, as above noticed, is worthy of more than a passing word. It is highly probable that a joint, when kept for a long time in one position, will have the relations of opposing surfaces modified, and, as a consequence, the tender spot will be found at the point where the greatest pressure is being exerted by one of the arthritic factors. In the knee-joint, for example, the spot in question is over the inner condyle of the femur. We have frequently observed that in false ankylosis at the knee-joint the prominence over the external condyle of the femur is depressed, while that for the internal condyle is rendered unduly prominent, thus showing, in other words, that a tendency to lateral subdislocation existed in such cases. It will be remembered that we are enjoined to *press firmly* upon this tender spot while at the same time the limb is flexed.

The book is throughout readable, fresh, and suggestive. It is printed on thick white paper, and presents a handsome appearance.

BOOKS AND PAMPHLETS RECEIVED.

The Druggist's General Receipt Book: Comprising a Copious Veterinary Formulæ; with Numerous Recipes in Patent and Proprietary Medicines, Druggists' Nostrums, etc.; Perfumery and Cosmetics; Beverages, Dietetic Articles, and Condiments; Trade Chemicals, Scientific Processes, and an Appendix of Useful Tables. By Henry Beasley, Author of the "Book of Prescriptions," etc. Seventh American from the Last London Edition. 8vo, pp. 497. Philadelphia, Lindsay & Blakiston, 1871.

The Physician's Dose and Symptom Book, containing the Doses and Uses of all the Principal Articles of the Materia Medica and Official Preparations. By Joseph H. Wythes, A.M., M.D., Late Surgeon U.S. Volunteers, etc. Tenth Edition. 18mo, pp. 277. Philadelphia, Lindsay & Blakiston, 1871.

The Physician's Visiting List for 1872. Twenty-first Year of its Publication. Philadelphia, Lindsay & Blakiston.

Description of an Anomalous Origin of the Right Subclavian Artery, associated with Anomalies of the Branches of both Subclavians; with Remarks. By J. Ewing Mears, M.D., Professor of Anatomy and Surgery in the Pennsylvania College of Dental Surgery. Extracted from the *American Journal of the Medical Sciences* for October 1, 1871.

GLEANINGS FROM OUR EXCHANGES.

NEW INCISION FOR LIGATURE OF SUBCLAVIAN ARTERY.—Assistant-Surgeon F. P. Staples, Medical Staff, communicates to the *Medical Times and Gazette*, July 22, 1871, some observations on ligature of the subclavian artery, suggesting a new incision. The course of this incision is thus described. The patient being placed in the usual position, with the head back and to the opposite side, and the shoulder slightly depressed, let the point of the knife be entered at the posterior edge of the sterno-mastoid muscle, one inch and a quarter above the superior margin of the clavicle, and let an incision be made from that point, in a straight line, to within a quarter of an inch of the attachment of the trapezius to that bone (clavicle), dividing the skin and the platysma muscle. This incision should

measure nearly three inches. The external jugular vein should now be ligated in two places and divided in the direction of the original incision. The deep cervical fascia should now be divided, and the edges of the wound gently separated, when the posterior belly of the omo-hyoid muscle will be exposed for its entire length. The edges of the wound should now be retracted, and the superior retractor should carry with it the omo-hyoideus; and when this has been done, the white cords of the brachial plexus, with the artery inferior and internal to them, will be observed to occupy the bottom of the wound. The knife should now be laid aside, unless it is necessary to dissect out a lymphatic gland, and the vessel separated from the lowest cord of the plexus with a director and ligated in the usual manner. Tying the external jugular vein is not insisted upon, provided it can be easily drawn aside, but generally a ligature would expedite matters, and any branches of this vein which cross the line of incision should, if divided, be treated in the same manner.

The advantages claimed for the operation are: 1. That the incision is parallel to the normal course of the artery. 2. That the true guide to the vessel—the posterior belly of the omo-hyoid—is exposed for its entire length by the incision recommended. 3. That the edges of incision admit of easy retraction, and in this way access to the vessel is easy. 4. That the risk of venous hemorrhage obscuring the final steps of the operation is lessened.

These special advantages are further claimed: 1. That the incision is parallel to the omo-hyoid muscle throughout its entire length. 2. Retraction of the edges of the wound can be made in both directions. 3. In the incision recommended there is no risk of dividing the transverse cervical vessels.

THEORY OF DISINFECTANTS.—Mr. T. P. Blunt, M.A., F.C.S., in a paper in the *British Medical Journal*, July 15, 1871, records the results of some experiments which he made to test the applicability of Dr. Hirsch's speculation that the disinfecting action of carbolic acid lies in its power of coagulating albumen,—that is, that the acid finds its way into the minute organisms which propagate disease, by diffusion through their investing membrane, thus reaching the albumen which they in common with all germinal matter contain, and, by coagulating it, causing their death.

Mr. Blunt took another coagulator of albumen—nitro-muriatic acid—and found that by its aid specimens of urine and meat were well preserved. He then proceeded to test iron-alum, sesquichloride of iron, common alum, chloride of zinc, and nitrate of lead; all of which are commonly used as disinfectants, and all of which he found to coagulate albumen.

He found that sulphurous acid and the sulphites would not coagulate albumen, and in their case believes that we must look for some more remote physiological effect upon germinal existence.

ACTION OF CHLORIDES ON CALOMEL.—In the *American Journal of Pharmacy*, August, 1871, Mr. Michael J. Cummings reports that, contrary to the opinion of Mr. Mialhe, but supporting that of Dr. Gardner, he has found that calomel is not converted into corrosive sublimate by the chlorides of the alkalis and metals at the temperature of the body. The change occurs less readily with chloride of sodium than with chloride of ammonium, but in neither case at a lower temperature than 110° Fahr.

THE CHEMICAL COMPOSITION OF PUS-CORPUSCLES.—Miescher (*Medical Times and Gazette*, from Hoppe-Seyler's *Med.-Chem. Untersuch.*, 1871, pp. 441-486), in order to obtain pus-corpuscles free from serum, treated pus and fabrics impregnated by it with saline solutions of appropriate density. In those liquids the pus-corpuscles sink to the bottom of the fluid, and may be obtained tolerably pure by repeated washing. Attention was first directed to the albuminoids of the protoplasm. Pus-corpuscles are composed mainly of albuminoids, and when treated with a solution of common salt they are converted into a viscid gelatinous mass,—a change dependent, as Rovida has shown, on the formation of a ring of hyaline substance around each corpuscle; but this is not due to myosin, for Miescher could obtain no reaction for this body. Five albuminoids were obtained, agreeing (in number at least) with the five different albuminates found by Kühne

in muscle. There were—alkaline albuminate, undetermined whether kept in solution by alkaline phosphate or not; an albuminoid coagulable at 118° to 120° Fahr., which was not merely albumen dissolved in alkaline phosphate; an albuminoid coagulable at the temperature at which ordinary serum-albumen coagulates; Rovida's hyaline substance; and a fifth albuminoid, the reaction of which need not be described here. Miescher was unable to detect paralbumen, though he does not deny its presence. The alcoholic extract of the globules was only investigated for lecithin and cerebrin, both of which were found to be present, the former in abundance. No gluten or chondrin was found in the watery extract, nor in the serum of pus. It must be understood that a mixture of lecithin and cerebrin forms the substance to which Liebreich assigned the name of "protagon"—a highly phosphorized material; for lecithin leaves on incineration an ash very rich in phosphoric acid. But Miescher has also demonstrated the presence of another phosphorized substance in the nuclei of pus-corpuscles, to which he has assigned the name nuclein; and he surmises that this body, on account of its phosphorus, plays an important part in cell-growth, and in the genesis of cell albuminoids and their derivatives. Nuclein closely resembles mucin, but is richer in phosphorus, and it appears to exist preformed in the corpuscles.

FIVE TEMPORARY TEETH AT FORTY.—The *Canada Journal of Dental Science* reports the case of a lady who had five teeth removed at the age of forty, and on examination they were found to be the temporary teeth, the permanent ones coming on after them.

REMOVAL OF THE KIDNEY DURING LIFE.—Prof. Simon, of Heidelberg (Schmidt's *Fahrbücher*, Bd. 151, Nr. 7, 1871; from the *Deutsche Klin.*, xv. 137, 1870), reports that he removed the left kidney during life from a woman twenty-six years of age, under the following circumstances: A year and a half before, ovariectomy had been performed, when, in consequence of the firm adhesions of the tumor to the adjacent organs, it was necessary to remove the uterus and to divide the ureter: the divided end of the ureter becoming adherent to the abdominal wall just above the symphysis pubis, the urine from the left kidney afterwards flowed through this fistulous orifice. An attempt to establish a communication between the ureter and the bladder, and in this way to close the fistulous orifice, was abandoned in consequence of the patient having been rendered seriously ill by it. It was found equally impossible, for the same reason, to produce an artificial closure of the ureter and atrophy of the kidney. It was therefore determined to extirpate the organ from behind the peritoneum, which was accordingly done. The patient bore the operation very well, and was able to leave her bed at the end of six weeks. The ligature which had been placed around the pedicle did not come away for six months; after which a great improvement in her health was observed.

Another case of extirpation of the kidney (same journal, from *Württemberg. Corr.*, Bl. lxi. 14, 1871) is reported by Dr. Linser. In this case the patient was a soldier who had been wounded in the left lumbar region. Bloody urine flowed through the wound at first, and subsequently pus mixed with blood. An incision was made from the twelfth rib to the crest of the ilium; but the kidney was so adherent to its capsule that it was necessary to remove part by the scissors. The patient sank eight hours after the operation.

PHOSPHORUS-POISONING.—In the *Lancet*, August 5, 1871, W. Anderson, M.D., reports a case of phosphorus-poisoning in a child aged twenty months, who sucked the heads off about twenty matches in the evening. It presented no particular symptoms next day, but the mother gave it a dose of castor oil, which operated freely. In the evening of the third day the child became drowsy and fell asleep, sleeping for nearly twenty hours. The fourth day oil of turpentine was given, and milk. On the fifth day the child vomited and showed signs of gastric and abdominal distress, which increased until the morning of the seventh day, when it died.

At the autopsy there was marked general ecchymosis, and the body presented an icteric tint. On opening the stomach a marked alliaceous odor was perceived, and the mucous membrane of that organ was much injected, as was also that of the ileum. The liver showed signs of commencing fatty

degeneration. No phosphorus could be detected in the substance of the liver.

DAHLBERG'S TINCTURE.—Tinctura colocynthidis, known also as Dahlberg's tincture, is made as follows: Colocynth pulp (cut small and free from seeds), 3j; aniseed, 3j; proof spirit, 1 lb. Digest for eight days, express, and filter. Dose, 6 to 20 drops.—*Medical Record*; from *Pharm. Journal and Transactions*.

THE TREATMENT OF SMALLPOX.—Dr. Alexander Collie, the resident medical officer at the Homerton Fever Hospital, says that treatment in the mild variety of variola is unnecessary, and in the black smallpox useless. In the confluent form, however, treatment is of the greatest importance, and the result of the case will sometimes be determined by it. The room in which the patient is placed should be thoroughly ventilated, the windows being kept open even in winter. If possible, there should be two beds in his room, in order that he may be changed from one to the other. He should be allowed a highly nutritious diet, consisting of milk, beef-tea, eggs beaten up with whiskey, tapioca. Cold water will be found most efficacious in relieving thirst, and the prejudice of the patient's friends should not be allowed to interfere with its administration. Effervescing drinks and lemonade may also be allowed. For heat of skin the patient may be sponged with cold water two or three times daily. If there be much restlessness or sleeplessness, the following repeated in half an hour, if needed, will be found of great service: tincture of opium, fifteen minims; spirit of ether, fifteen minims; camphor water, one ounce; and if this fails, stimulants may be given. For the soreness of throat, oleaginous or mucilaginous drinks may be given, and the following has also been found beneficial: Tincture of iron and glycerine, of each, thirty minims three times a day. If laryngitis occur, a large linseed poultice should be applied round the throat, and the temperature of the room should be raised, and rendered moist by means of steam. All depressing remedies should be avoided, and tracheotomy should be performed whenever there is much interference with the respiration. If the patient becomes delirious, it is of the utmost importance that he should be treated with patience, gentleness, and firmness, and that no measures of restraint should be employed. Nothing has been found absolutely preventive of pitting. Common olive oil may be used for this purpose in preference to applications which are more or less irritating. If diarrhoea occur, a mixture containing laudanum and sulphuric acid may be given.

In regard to the time when a smallpox patient may be considered free of danger to his neighbors, Dr. Collie says that this cannot be until all the products of disease are removed from his body, and until he presents all the ordinary indications of health; such as a normal temperature, a quiet pulse, a clean tongue, a clear mind, etc.

SINGING BY APHASIC CHILDREN.—Dr. Hughlings Jackson reports in the *Lancet* for September 23 two cases in which children who had the power of uttering only a few words were able to sing very correctly and to pick up tunes. In one of the cases the child could utter words when singing which he could not when speaking. Dr. Laségue knew a musician who was completely aphasic, and who could neither read nor write, and yet who could note down a musical phrase sung in his presence.

HYDROPHOBIA IN A HORSE.—A singular instance of this disease is recorded in a recent number of the *Zeitschrift für Parasitenkunde* (*Nature*, August 17, 1871, p. 308). A horse which had been some time before bitten by a dog supposed to be mad was brought to the hospital of the Royal Veterinary College at Berlin, suffering from an uncontrollable propensity to bite, not only men and other animals, but any hard substance, and even its own body, by which it had severely injured its mouth and broken several of its teeth. After its admission to the hospital, this propensity was violently manifested in fits, preceded by remarkable convulsive movements, after which it would fall suddenly, and remain for a time perfectly motionless, becoming gradually weaker after each attack. It had refused food for two days, and died, without a struggle, on the evening of the day on which it was admitted. An examination showed no organic disease, but considerable internal inflammation.

CONNECTIVE TISSUE IN OEDEMA.—L. Ranvier (*Centralblatt*; from *Comptes Rendus*, July 10, 1871) has found that when œdema is artificially produced in the leg of a dog the following lesions of the connective tissue will be observed: The bundles of fibres are separated from one another by clear serum, in which are suspended numerous white blood-corpuscles having a normal appearance and possessing amœboid movements. The fixed cells, instead of being flat, have become round, and are filled with highly-refracting particles. The capillaries and the small arteries and veins are distended with blood, and their inner surfaces are lined with white blood-corpuscles: consequently, the extravasation of these cells and their collection along the sides of the blood-vessels do not necessarily indicate the presence of inflammation.

MISCELLANY.

A MYSTERIOUS CASE.—The following account, which we take from the *Public Ledger* of October 9, is of interest, as showing that a man may live several days with a foreign body in his brain:

"On the 2d of October, Thomas Buckley, aged sixty-four years, a tinsmith, was admitted to the Alms-house, as the authorities there state, from the Third District Police Station. This, however, the police-officers have no recollection of. On his admission, being intoxicated, he was placed in the drunken ward, from which, as he appeared to be suffering from some injury, he was transferred to the surgical ward, and from thence to the out-ward, and again into the drunken ward. During these many transfers he appeared to be suffering from pain and gradually sinking, and on Saturday he died. A post-mortem examination was made, when a knife-blade about two inches long, apparently from an ordinary pocket-knife, was found driven through the skull, on the right side, just above and in front of the ear, and imbedded almost its entire length in the brain. The blade was not broken off, but appeared to have come from the handle by the loosening of the rivets. It was covered over by the skin, and but a slight wound left to show where it had entered. No clue as to how this weapon came there has been obtained."

At the coroner's inquest, which was held a few days later, no other facts were developed.

THE MENTAL CONDITION OF THE PARISIANS.—The *Medical Times and Gazette* says that the returns of the Paris lunatic-asylums show a diminution in the amount of madness, and suicides have, since the first investment of Paris, become unusually rare. On the other hand, a sort of idiotic stupor prevails to a considerable extent, especially among women, owing, it is said, to the successive shocks given during and after the siege to the nervous system.

THE PRUSSIAN LAW IN REGARD TO THE PRACTICE OF MIDWIFERY.—In a small country town in Prussia, a widow, of generally creditable character, was recently sentenced to four weeks' imprisonment for performing the duties and receiving the pay of a midwife without the proper previous training and qualification. As far as appears, no ill had resulted to any one from her services in this capacity; but she was indicted for presuming to practise a vocation wherein the question of human life was so immediately concerned, without the proper education for the business. The *Kansas City Medical Journal*, in commenting upon this, says, "The Prussians evidently think more of their wives and babies than do we Americans."

SIAMESE TWINS.—We take the following from the *Druggists' Circular*:

"The Siamese twins are among the most remarkable united

twins the world has latterly known. In the year 1100, Eliza and Mary Chalhurst were born in Kent, England, united twins. They lived in this condition thirty-four years, and then one died. It was proposed to cut them apart; but the survivor would not consent, and she was dead six hours after her partner. Two girls were born, fastened together, in Edinburgh, many years ago. The food one ate nourished the other; but often when one slept the other would be 'wide awake.' They lived seven years.

"In 1700, Helen and Judith were born at Presburg, Hungary, united back to back. They lived twenty-three years. Judith was always feeble, Helen always well and strong; yet they both died at the same moment. In 1856, two children were born united as Helen and Judith were. They are said to be living in Texas at this moment. They are entirely different in disposition and temperaments, and often have bitter quarrels. Lazarus and John Colorado, born at Genoa in 1617, lived many years. The attached and imperfectly developed twin John hung *with his head downwards* from the lower part of the chest of Lazarus. This double monster married and had several children, who were perfectly and admirably developed. They all visited Scotland in 1642. At the court of James III. of Scotland there lived a man double above the waist and single below it. The two heads learned several languages, and often debated together. The two halves also often engaged in angry fist-cuffs. This monster lived twenty-eight years. One of the bodies died several days before the other. Dr. Boehm, a celebrated German surgeon, recently cut asunder two female children, aged five years, who were joined like the Siamese twins. One of the girls died on the day of the operation. The other was, at last accounts, alive, and in the best of health."

A MEMORIAL TO HARVEY.—We are glad to learn from the London *Lancet* that at a public meeting held at Folkestone it was resolved to erect in that town a statue of Harvey. It is hoped that this object will be realized by April, 1878, which will be the tercentenary of Harvey's birthday, for he was born on the 1st of April, 1578, at Folkestone.

THE GOODSIR FELLOWSHIP.—It will be remembered that soon after the death of Prof. Goodsir his friends and pupils endeavored to raise by subscription a fund sufficient to establish a Fellowship in Anatomy and Physiology in the University of Edinburgh, to be called the Goodsir Fellowship. This idea, in consequence of the amount collected not being sufficient for the purpose, has been abandoned, and it is now proposed to institute a Scholarship in Anatomy and Physiology.

A NEW POISON-BOTTLE.—An invention which is likely to add to the security of persons for whom poisonous draughts, liquors, or solutions, for external or internal use, are prescribed, is recorded in the *British Journal*. There are a number of conical projections from the surface of the bottle, so arranged that any one grasping it carelessly in mistake in the dark will "from the nettle danger extract the flower safety." We should be very glad to see this bottle in general use in this country.

AN EYE FOR AN EYE.—There is danger as well as pleasure attendant upon the practice of medicine, as the following extract from the New York *Tribune* shows. The wife of one Giovanni Marcelli, an Italian resident of Cairo, in Egypt, lost her sight after careful treatment for ophthalmia by a prominent oculist, Dr. Altier Garrulier. The husband, from a feeling of senseless revenge, waylaid the doctor and his secretary as they were going home one night, and threw *nitric acid* into their eyes, entirely destroying them.

MEDICINE IN RUSSIA.—According to the official reports of 1870, there were in that year 10,000 legally-qualified medical

practitioners in Russia, of whom 6113 held public appointments and 4686 were engaged in private practice. There is about one medical man to each 7182 of the population. Among the lower classes, the *British Medical Journal* says, the value of rational professional assistance is quite unrecognized; and hence infectious diseases commit frightful ravages, and the mortality among children is greater than in any of the countries of Western Europe.

CHARITY AND INDEPENDENCE.—The *Medical Times and Gazette*, in an article on this subject, says:

"There is no more difficult question than the one relating to the dispensing of gratuitous advice in our medical charities. There is no charity so much abused, and none the exercise of which tends to demoralize the recipient more hastily or effectually. We have noticed on several occasions the large sums which have been subscribed by the working-men of Birmingham for the extension of the Queen's Hospital. We are not altogether gratified with the proceeding. To some extent it is worthy of commendation; but is it altogether beneficial either to the hospital or to the working-classes? We scarcely think it is; and it is liable to be much misapprehended. Will not these working subscribers demand, as it were, that as a right which is in reality a favor? Is it not to be feared that this 'system' may merge into a large hospital club, and thus inflict great injury, not only on surgeons in general practice, but also on the subscribers themselves? It will be curious to watch the result of the proceedings, and to determine whether the example set by the Queen's Hospital at Birmingham should or should not be followed."

THE ANGLO-AMERICAN AMBULANCE.—From the same journal we take the following:

"Apropos of the admirable work of this ambulance, we may notice some prevalent misconceptions as to its relations, and a little 'trouble' which occurred at the outset, and of which some incorrect versions have been recently current in the papers. The ambulance was Anglo-American in constitution of its *personnel* and in its origin, but it was Anglo-French in its equipment at the outset, and wholly English in its finances and supplies through its later stages. The facts are that Dr. Evans, the dentist of Paris, Chairman of the American Committee, opposed to the utmost the proposition of Drs. Sims, MacCormac, Frank, Pratt, Tilghman, and May, to start for the scene of action and join the army. So energetic and effectual was his opposition that these gentlemen separated themselves entirely from Evans' committee, and, being thus regularly constituted and supported by the French and English societies, started, in spite of that gentleman and independently of his aid, for Sedan. At the last moment, the feeling of annoyance led to a personal fracas between Dr. Sims and Dr. Evans, which the latter recently brought before the French police, and, on their declining to take any notice, brought a civil action against Dr. Sims, in which he laid his damages at £200 and received £12. After this premature act of warfare on the part of the chief of the ambulance, they started, unimpeded, for the seat of war, and, fortunately, reached Sedan in time to render services which have reflected lustre on both societies and on all the *personnel* of the staff."

THE ORIGIN OF ENEMATA.—We take the following from the *British Medical Journal*:

"Frederigo Kernot, of Naples, in a newly-published *Storia della Farmacia*, describes 'with true Southern liveliness,' according to the *Pharmaceutical Journal*, the invention of the enema-apparatus, which he looks upon as an epoch in pharmacy as important as the discovery of America in the history of human civilization. The glory of the invention of this instrument, so beneficial to suffering mankind, belongs to an Italian, Gatenaria, whose name ought to find a modest place together with Columbus, Galileo, Gioja, and other eminent and illustrious Italians. He was a compatriot of Columbus, and professor at Pavia, where he died in 1496, after having spent several years in the perfection of his instrument. The enema-apparatus may be justly named the queen of the world, as it has reigned without a rival for three hundred

years over the whole Continent, besides Brazil and America. The enema came into use soon after the invention of the apparatus itself. Bouvard, physician to Louis XIII., applied two hundred and twenty enemata to this monarch in the course of six months. In the first years of Louis XIV. it became the fashion of the day. Ladies took three or four a day to keep a fresh complexion, and the dandies used as many for a white skin. Enemata were perfumed with orange, angelica, bergamot, and roses; and Mr. Kernot exclaims enthusiastically, 'O! se tornasse questa moda!' (Oh that this fashion would return!). The medical profession at first hailed the invention with delight, but soon found the application *infra dig.*, and handed it over to the pharmacist; but shameful invectives, sarcasms, and epigrams, hurled at those who exercised the humble duty of applying the apparatus, made them at last resign it to barbers and hospital-attendants. As a specimen of these epigrams, the author gives the epitaph on the tombstone of an ancient pharmacist:

"'Ci-git qui pour un quart d'écu
S'agenouillait devant un cu.'"

THE number of deaths from smallpox in Philadelphia for the weeks ending October 14 and 21 were respectively 54 and 74.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending	
	Oct. 14.	Oct. 21.
Consumption	37	33
Other Diseases of Respiratory Organs	29	33
Diseases of Organs of Circulation	11	9
Diseases of Brain and Nervous System	53	38
Diseases of the Digestive Organs	25	22
Diseases of the Genito-Urinary Organs	8	1
Zymotic Diseases	71	87
Debility	24	33
Cancer	9	7
Casualties	11	9
Old Age	7	8
Stillborn	14	13
Intemperance	0	2
Scrofula	2	2
Syphilis	0	2
Suicide	2	0
Murder	0	4
Tumors	1	1
Tetanus	0	2
Unclassifiable	7	6
Unknown	5	1
Totals	316	313
Adults	165	152
Minors	151	161

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM OCTOBER 5, 1871, TO OCTOBER 18, 1871, INCLUSIVE.

MILLS, M., SURGEON.—By S. O. 395, War Department, A. G. O., October 9, 1871, leave of absence extended thirty days.

MILHAU, JOHN J., SURGEON.—By S. O. 212, Department of the South, October 7, 1871, granted leave of absence for twenty days.

PETERS, DE WITT C., SURGEON.—By S. O. 393, War Department, A. G. O., October 7, 1871, granted leave of absence for thirty days, with permission to apply for an extension of sixty days.

FRYER, B. E., SURGEON.—By S. O. 174, Department of the Missouri, September 30, 1871, granted leave of absence for thirty days, with permission to apply for an extension of thirty days.

CALDWELL, D. G., ASSISTANT-SURGEON.—By S. O. 214, Department of the South, October 12, 1871, granted leave of absence for thirty days, with permission to apply for an extension of sixty days.

LORING, L. Y., ASSISTANT-SURGEON.—By S. O. 181, Department of the Missouri, October 9, 1871, upon distribution of companies of 6th U. S. Cavalry to winter quarters, to take post at Fort Riley, Kansas.

PATZKI, J. H., ASSISTANT-SURGEON.—By S. O. 199, Department of Texas, October 4, 1871, relieved at Fort Richardson, and assigned to duty at Fort Clark, Texas.

WEDNESDAY, NOVEMBER 15, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON TUMORS OF THE LARYNX IN CHILDREN.

BY WILLIAM PEPPER, M.D.,

Lecturer on Clinical Medicine in the University of Pennsylvania; Physician to the Philadelphia Hospital and the Children's Hospital.

GENTLEMEN,—I regret to say that the child whom I brought before you about two weeks ago, and in whose case I diagnosed the presence of a tumor in the larynx, has died. A post-mortem examination has been made, and I wish to-day to ask your attention to the morbid appearances found. In order, however, that we may more clearly comprehend the explanation which this lesion affords of the symptoms presented by the patient, I will recall to your minds the principal points in the progress of the case.

The patient, Ellen R., a well-developed girl, 3½ years old, had suffered, five months before coming under observation, with a severe attack of measles, attended with a great deal of cough. The attack subsided, and the child seemed to be slowly convalescing, when she was seized with symptoms probably indicating an acute affection of pneumonia. She was very ill with the second attack for about two weeks, when, upon beginning to convalesce, it was noticed that her voice was very feeble. This impairment of voice steadily increased, becoming associated with difficulty of breathing, and when the child first came under my notice, two weeks ago, she was unable to speak above a whisper, while her dyspnoea was painful to witness. Each inspiration was accompanied by a loud prolonged stridulous sound. A violent effort was necessary to expand the chest, and the act was attended with a marked deepening of the supra-sternal notch and the formation of a deep depression around the base of the chest. Expiration was quiet, but much prolonged. She also suffered from paroxysms of dyspnoea occurring during the night, which were occasionally so violent as to threaten a fatal result. There was no cough accompanying the aphonia and dyspnoea. There was no difficulty in deglutition, and the finger passed deeply into the pharynx could detect no obstruction. There was no enlargement of the thyroid or cervical glands. The percussion-resonance was unimpaired in any part of the thorax; the respiratory murmur was marked by the loud laryngeal sibilus. There were no signs of disease of the heart or great vessels. The general nutrition of the child was not materially impaired, though her strength was evidently suffering severely.

Repeated and patient efforts were made by Dr. J. Solis-Cohen and myself to obtain a view of the vocal cords and interior of the larynx by means of a laryngoscope. The irritability of the throat was extreme, and every time that the mirror was placed in the fauces a violent spasm of the glottis occurred, with alarming embarrassment of breathing, so that we were obliged to desist from our efforts without having succeeded.

The first question in connection with this case which called for solution was with reference to the cause of the loss of voice and obstructed breathing. It was apparent, in the first place, that these symptoms depended upon some positive mechanical cause, and not upon a mere spasmodic contraction of the glottis. It is true that there were violent spasmodic exacerbations of the dyspnoea occurring at night, but these were merely superadded to the very marked obstruction to respiration, with loud stridor and almost complete aphonia, which was constantly present. In addition, however, to this persistence of the dyspnoea, there were two

symptoms which in particular pointed to the existence of actual mechanical obstruction of the air-passages. These were the deepening of the supra-sternal notch and the recession of the base of the thorax, which were so marked during the labored efforts at inspiration. I attach great importance to the presence or absence of these signs in any case where such obstruction of the larynx or trachea is suspected, and a moment's consideration of the conditions of respiration will make clear to you their significance and mode of production. Ordinarily, when inspiration begins, the vocal cords are separated, the calibre of the larynx and trachea is freely opened, and as the thorax is expanded by the contraction of the respiratory muscles, the air enters the lungs rapidly and freely, and thus neutralizes the atmospheric pressure upon the exterior of the chest, which tends to oppose its expansion. When, however, there is any mechanical obstruction in the larynx or trachea by which the calibre of the tube is reduced, the free entrance of air during inspiration is interfered with, and, as the powerful contractions of the respiratory muscles expand the thorax, the pressure upon the inner surface of the chest-walls is not sufficient to neutralize that upon the exterior. As a consequence, those parts of the chest-walls which have least firmness and power of resistance in themselves, as the parts about the upper opening of the thorax and the base of the chest, are forced inwards by the excessive external pressure. So that in cases of pseudo-membranous croup, of tumors of the larynx, of pressure upon the trachea by solid or aneurismal tumors, we find these symptoms of deepening of the supra-sternal notch and recession of the base of the thorax appearing during inspiration to mark the existence of a diminution in the calibre of the primary air-passage. I could not doubt, therefore, that in the case of our little patient there was, from some cause or other, such a mechanical obstruction to respiration; but the even more important question as to the precise nature and seat of this obstruction remained to be solved.

Was it, in the first place, seated within the air-passages, or was it due to some cause which acted upon the larynx or trachea from without? Clearly not the latter. The conditions which most frequently induce such pressure are aneurism of the arch of the aorta, post-pharyngeal abscess, and enlargement of the bronchial glands. The youth of the patient forbade any idea of the existence of an aneurism, and a careful examination of the heart and great vessels proved that they were free from disease. With reference to post-pharyngeal abscess, it must be remembered that the disease, although a rare one, is comparatively quite frequent in childhood, in consequence of the frequency of caries of the vertebræ during that period of life. It must be borne in mind also that caries of the vertebræ, as well as many so-called scrofulous affections in children, can be traced back to the occurrence of an attack of measles, which is perhaps more apt than any other of the exanthemata to be followed by the development of such sequelæ. When caries affects the cervical or upper dorsal vertebræ, the pus which forms between the anterior surface of the vertebral bodies and the wall of the pharynx gradually collects until it causes a distinct tumor, encroaching on the calibre of the pharynx, and, when of large size, also pressing on the trachea so as to cause great difficulty in breathing. It will be remembered, however, that, in the case we are now considering, the patient was a vigorous, healthy-looking child, without a visible trace of any scrofulous affection; and careful examination of the pharynx, both by the eye and the finger, failed to discover any bulging of the posterior wall. It must follow also that whenever a post-pharyngeal abscess exists, the interference with the

trachea must always be secondary, while the first effect will be encroachment on the œsophagus or pharynx, with consequent difficulty of deglutition. This was entirely absent in our case, so that we could safely conclude that the cause was of a different nature.

If, however, these conditions could be readily and positively discarded, the arguments in favor of the existence of enlargement of the bronchial glands causing pressure upon the trachea seemed much more powerful at first sight. This affection of the bronchial glands occurs in its best-marked form between the ages of two and six years, and in many cases is developed after the severe bronchitis which is apt to accompany measles. The enlargement may go so far as to cause strong pressure on the trachea, producing great difficulty in respiration, with prolonged wheezing or stridulous breathing. There are, however, other highly characteristic symptoms of enlargement of the bronchial glands which were entirely wanting in our case. Thus, cough of a peculiar paroxysmal character is a constant attendant. The veins of the neck are apt to be distended, and the face often becomes puffy and œdematous; and the enlarged glands come in contact with the walls of the chest, and give rise to dullness on percussion in the interscapular region, and sometimes over the middle part of the sternum. The voice may be weak, but the same remark applies here as well as to the supposition of a post-pharyngeal abscess, that any degree of pressure upon the trachea short of complete occlusion would scarcely cause such extreme aphonia as was present in our little patient. Finally, if the obstruction had been so low down as the bronchial glands, I do not think there would have been such a marked development of supra-sternal depression and retraction of the base of the chest during inspiration.

After having thus carefully considered these various points and excluded all possible causes of pressure upon the trachea from without, I found myself led to the conclusion that the cause of obstruction must depend upon conditions within the air-passages themselves.

It will be remembered here that, despite the most patient endeavors, it proved utterly impossible to obtain any view of the vocal cords or interior of the larynx by aid of a laryngoscope, so that it was necessary to depend solely upon general considerations in determining the seat and nature of the lesion. The three conditions which would most naturally suggest themselves in explanation of such a group of symptoms are—paralysis of the vocal cords; chronic inflammation of the larynx, with contraction of its calibre from swelling of the tissues, or, on the other hand, from the cicatrization of an old ulcer; and, finally, the growth of a tumor in its cavity.

The extreme degree of aphonia rendered it probable that the vocal cords were affected, and it is evident that in cases where there is palsy of their muscles the voice would be lost, while at the same time respiration would be seriously interfered with. Thus, during the act of inspiration, when the cords should be drawn apart, they would, on the contrary, be forced together by the pressure of the entering air, so as to obstruct its passage into the larynx. Hence we might have in such a case labored, difficult inspiration, with all the attendant symptoms. The difficulty of respiration would, however, of course be limited solely to the act of inspiration, and expiration would be quiet, easy, and free; whereas I have told you that in this case it was much prolonged, and evidently was obstructed. Besides this conclusive sign, it would have been quite impossible to afford any reasonable explanation of the occurrence of paralysis of the vocal cords in the present case, so that the idea of its existence had to be abandoned.

We are familiar with various forms of chronic inflammation of the larynx, with or without ulceration, as

occurring in adult life, which are capable of inducing aphonia and marked obstruction to breathing: such are the chronic catarrhal, the tuberculous, and, most especially, the syphilitic. All of these are, however, extremely rare in children; and the mode of inception and symptoms of the disease in the present case precluded the idea that it was of any such nature. It occasionally happens, however, that a severe form of secondary croup, attended with ulceration and pseudo-membranous exudation, occurs as a sequel of measles; and, though the course of this affection is generally acute and terminates either in recovery or death, it is possible that the acute symptoms might subside, leaving a considerable amount of ulcerative destruction of the mucous membrane, so that as cicatrization occurred there would be progressive loss of voice and interference with breathing.

I say that this might occur; and, though I do not believe it could lead to such extreme aphonia and dyspnoea as were here present, I dwell upon it because I know no single symptom by which such a condition could be diagnosed from gradual obstruction of the larynx from the growth of a tumor. You might expect that aid is to be drawn from a consideration of the mode of origin of the symptoms and from laryngoscopic examination. Unfortunately, however, the use of the laryngoscope is often impossible in the case of young children. Even where there is no morbid sensitiveness of the parts, the narrowness of the fauces and the rapid accumulation of mucus render it difficult to obtain a view of the vocal cords and interior of the larynx. Every effort should be made, however, to succeed. If time allows, the child should be patiently taught to tolerate the presence of the faucial mirror; but, even after frequently-repeated trials, failure to make a thorough examination will often result, as it did in this case. Nor can we always hope for valuable aid from the history of the case. It is true that if, without the occurrence of any previous disease, and without symptoms of laryngitis being present, evidences of laryngeal obstruction gradually appear, and increase until there are marked weakness of voice and labored respiration, attended with occasional spells of spasmodic dyspnoea, we may confidently assert the existence of a tumor. But, on the other hand, we can by no means exclude the idea of a laryngeal tumor because the symptoms have made their appearance after an attack of some acute disease attended with symptoms of laryngeal irritation. Thus, in a case on record (Transactions of the Pathological Society of London, vol. ix. p. 55, Case No. 6 in tabulated list in Holmes' *Surgical Treatment of Children's Diseases*, p. 307, 2d ed., Philadelphia, 1869), the alteration of voice followed an attack of measles, and yet at the post-mortem examination the cause of obstruction was found to be a villous tumor attached between the vocal cords.

You will comprehend, therefore, how difficult is the diagnosis between chronic laryngitis and laryngeal tumor in cases where, owing to the extreme youth of the patient, laryngoscopy is impossible. Nevertheless, you will in some cases be able to form a correct opinion even without the aid of this invaluable means of diagnosis. A study of the mode of origin has some value, as we have seen. The absence of cough, of expectoration of muco-purulent matter, of tenderness over the larynx,—the gradual progressive development of the symptoms, without exacerbations from intercurrent catarrhal attacks,—all point to the existence of a tumor. It was chiefly by a careful review of these considerations that I was led to believe that the symptoms in my patient's case were due to the gradual growth of a tumor in connection with the vocal cords.

There is one further symptom occasionally noted in cases of tumor of the larynx, and which when present

is of marked diagnostic value. I allude to the fact that in some cases the symptoms of obstruction almost or quite disappear in the intervals of the spasmodic attacks of dyspnoea. This occurrence, which never takes place when the obstruction is due to chronic ulcerative changes, would seem to be capable of explanation only on the supposition that the tumor is attached by a pedicle, allowing it a certain degree of motion, so that at times it may become engaged in the glottis and thus induce a frightful paroxysm of dyspnoea, and then again, after a short time, fall back into its ordinary position, where it would give rise to but slight obstruction.

I will in the concluding part of this lecture complete the history of this patient, and discuss the treatment to be adopted in such cases.

(To be concluded.)

ORIGINAL COMMUNICATIONS.

ON PUERPERAL ECLAMPSIA.

BY JOSEPH CARSON, M.D.,

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THE following cases have been selected from my note-book, as typical ones, in illustration of the positions that were taken with respect to puerperal eclampsia in an article I published in the *American Journal of the Medical Sciences*, April, 1871. In that paper a full review of the knowledge possessed upon the subject, gathered from every available source, was given, and from it will be drawn in the present communication the materials constituting the remarks elicited by an examination of the features of these cases. They are now reported as the text for illustration of the conclusions arrived at in the paper to which reference has been made.

Mrs. L., the wife of a physician, aged 27, of delicate, anæmic constitution, and with tendency to affection of the lungs, was pregnant with her first child in 1858. When the seventh month of pregnancy had arrived, it was noticed by her husband that her lower limbs were much swollen, but in other respects her general condition did not present any unusual features. I was not called to see her until the eighth month, when the urine was found to contain albumen largely, and to have the specific gravity of 1017.

On the 10th of November (the beginning of the ninth month, as nearly as could be ascertained) I found that the dropsical swelling was rather increasing, but that she complained of little uneasiness, except confusion of head when long occupied in sewing: this occupation was interdicted. Although her urine appeared to be in usual quantity, some sweet spirit of nitre was directed, and her bowels to be kept regular by Saratoga water.

On the morning of November 18th I was called to see her in labor, which had commenced in the night with the discharge of the liquor amnii. Her husband stated that she had been apparently well for the last few days, with the exception of some shooting pain in the forehead and a little confusion, which passed off in a few minutes. He had administered a Seidlitz-powder. I found that she was perfectly calm, with an unaccelerated pulse, and that her pains were of a forcing character, at intervals of ten minutes. On examination, I found the os uteri well dilated and the nates of the child presenting, the left foot a little in advance of the scrotal tumor.

At 12 M. the labor was proceeding well, the child having descended so as almost to reach the perineum and distend it, with fair propulsive effort of the uterus. There was no complaint of the head or premonitory symptom of convulsions.

At 12 ½ P.M., when the child fairly distended the perineum, she became pale, swooned, and was seized with a violent con-

vulsion. It was deemed expedient, when the convulsion had subsided, to hasten delivery by traction with the finger in the groin of the child, by which I succeeded in delivering the nates; the body and arms soon followed. At this stage another convulsion came on, in the midst of which I succeeded in getting the narrow blade of a vectis above the head and bringing it away. The child was born in a state of asphyxia, but after a short time respiration was established, and it did well.

The after-birth was removed without difficulty.

After delivery the convulsions returned every twenty minutes for three hours, lasting a few minutes, with a soporose interval, the return to consciousness being the precursor of the convulsive attack, and its approach being preceded by the clearing of the circulation of the face and head and a return of the arterialized condition of the blood. When the convulsions terminated in congestion of the brain, with the livid fulness of the vessels of the head and face, the smoke-pipe motion of the mouth, with stertor, was an attendant. Immediately preceding the invasion of the convulsions, the countenance became pale, and the pulse, from being quick and feeble, was almost lost. The skin was cold. Some hemorrhage had followed the separation of the placenta, which told on the circulation.

The treatment consisted of stimulants to the external surface, dry cups upon the temples and behind the ears, and cold to the head. After the cupping a blister was applied to the nape of the neck, and thirty drops of tincture of opium and a fluidrachm of tincture of assafetida in half a fluidounce of water were thrown into the rectum. This was repeated.

At 5 P.M. the interval between the convulsive attacks was prolonged to one hour. Exhaustion then being a prominent condition, and as the patient could not swallow, it was determined to throw into the bowels a nutritive and stimulating injection: accordingly, a fluidounce of chicken-soup, a dessert-spoonful of sherry wine, and a grain and a half of sulphate of quinia were administered. This was repeated every hour.

At 9 P.M. the interval had extended to two hours. The blister on the back of the neck had drawn fairly. At 11 P.M. the last convulsion took place, after which the patient, although unconscious, was very restless: this latter state being attributed to distention of the bladder, it was relieved by the catheter. The urine had the specific gravity of 1017. It formed a thick coagulum of albumen by heat, and on examination for urea yielded 1000.

November 19, 10 A.M.—The patient, after the last convulsion and relief to the bladder, slept soundly and naturally, which continued through the early morning. She has now returned to partial consciousness and taken some nourishment. Pulse 93, and weak. Skin warm. Nourishment and stimulants directed.

November 20.—Passed a good night. Consciousness perfect. Pulse 93, with more force than yesterday. Skin warm. Complaints of being weak, and says she is a little confused in thought and recollects nothing that has passed. Limbs sore. Urine passed by catheter. Nourishment maintained.

November 21.—Slept well; is perfectly rational and composed. Pulse good,—86. A large quantity of urine was drawn off by catheter. Complaints of the blister and of soreness in her limbs, from which the dropsical effusion is disappearing. Urine free from albumen; specific gravity 1013. Some show of secretion of milk.

This lady gradually recovered under the use of nourishment and tonics. The dropsical effusion totally disappeared. She never, however, became robust, and in a few years her pulmonary tendency terminated in phthisis, of which she died.

Mrs. —, æt. 33, of delicate constitution, the mother of five children, has always had easy labors, but on three occasions has suffered from febrile disturbance in connection with the establishment of lactation, and some derangement of the alimentary canal. These attacks readily yielded to mild treatment.

During the years 1862 and 1863 she was subjected to much anxiety in connection with her husband, who, as an officer of the army, incurred great personal risk. She also, in the summer of the latter year, was forced to undergo the fatigue of nursing him through an alarming illness, so that through the winter of 1864 her health was decidedly impaired; she

also had a miscarriage, from which she lost a considerable amount of blood. The tendency was to dropsical effusion.

In 1865 she again became pregnant, and on November 8th was confined, having her usual speedy labor, and apparently doing well until the 20th (the twelfth day after confinement), when, having risen in the morning and expressing herself as perfectly comfortable and happy at her favorable recovery, she was seized at noon with confusion of ideas, inability to articulate, cold extremities, and pallor of countenance, which terminated in convulsions and the occurrence of insensibility, which continued until six o'clock of the morning of the 21st.

At 10 A.M., November 21, I found her in the following condition: conscious so as to recognize me with a smile, but unable to express herself, answering questions by a nod or shake of the head: her intellect was evidently confused. She complained of pain in the head; face somewhat flushed in contrast with her usual pallor; pupils obedient to the light and perfectly equal; could not protrude the tongue, but no paralysis of it or of her face and limbs; pulse 120, soft and feeble. Passes her water freely, and has an inclination to go to stool. Has been once up in the endeavor. Examined the urine, and found it highly charged with albumen.

November 22.—Pulse 120, soft. Intelligence improved; can answer questions by motion of the head with more comprehension of them than yesterday; still unable to articulate. Skin moist. Pupils dilated, but equal. Face has lost its flush, —a little puffy,—and no headache. Tongue very foul. Great desire for drinks. At 3 P.M., hemiplegia was evident. She could not raise or command the right arm or leg. Nourishing diet in the form of meat-essences was allowed, and small doses of calomel (one-fourth of a grain every three hours) were directed, with mild diuretic salines.

November 24.—Intelligence a little better; she manifests emotion at the restriction of her drinks and diet, which are kept within proper limits for fear of rejection by the stomach; in recognizing her attendants, she manifests pleasure by pressure of their hands with her own left hand; says she has a little headache, when interrogated with respect to it, by an affirmative nod of the head, but its extent cannot be ascertained. Face a little flushed. Pupils a little dilated; not unequal. No attempt at articulation, and the effort to protrude the tongue is not made, although she can open widely her mouth. Tongue furred, but less so than at last visit. Skin pleasant. Pulse less frequent, 110, soft. Cannot move her right arm any better, but moves the corresponding leg. Passes urine freely. Bowels freely moved several times, the dejections being very dark and offensive. This was undoubtedly due to the calomel, which on the first movement of the bowels was stopped. The same diet was continued, and sherry wine and water allowed as drink. Ten grains of benzoic acid were ordered every three hours, as the urine still continues albuminous.

December 2.—Intelligence much improved; able to indicate her wants, and desirous of having her clothing entirely changed. Upon the baby being presented to her, fondled it in her arms and raised it in the air. Her power of speech has not returned, except to lisp 'yes' or 'no' in reply to questions. Skin soft. Pulse natural in frequency, except when quickened by emotion. The tongue is clean, the bowels are regular, and the urine free from albumen. Paralysis of arm and leg not perceptible, as she can use her limbs in moving and turning. Since the 29th of November, has been under the use of tincture of iron with sweet spirit of nitre, and elixir of calisaya bark, with half a grain of sulphate of quinia in each dose, three times daily.

This lady slowly recovered, although the aphasia continued for a long time, when her speech remained slow and deliberate, rather than hesitating and interrupted.

Remarks.—The features of the first of these cases which attract our attention are that the subject was delicate and anæmic, that she labored under albuminuria two months at least before delivery, and that dropsical effusion had occurred. In the second case there had been dropsy, and it is to be presumed that her urine was albuminous when labor occurred, as it was found subsequently to be.

The association of albuminuria and dropsy in preg-

nancy, as well as under other circumstances, is a fact now well understood by the profession. Dropsy was noticed as early as 1800 by Dr. Hamilton, of Edinburgh, and this observation was confirmed by other observers, as by Demarret in France and Burns in England. It was first noticed by Dr. Norman Lyman in this country in 1824. The existence of albumen in the urine in dropsies had been pointed out by Dr. Blackall some years before the researches of Dr. Bright which led to the recognition of the condition of the kidneys since known by the name of that distinguished pathologist.

The occurrence of convulsions with albuminuria was noticed by Dr. Bright, who in his account of the disease reported five cases. The connection between albuminuria and puerperal convulsions with dropsy as a concomitant was first distinctly stated by Dr. Lever, in 1843, and in this he was supported by Dr. Simpson, of Edinburgh. Dr. Lever called his cases by the name of "anæmic convulsions." It is clear, then, that our cases come into the same category. As albuminuria disappears, in most of the cases of pregnancy, when labor has taken place, it must be admitted that the cause of albumen in the urine, except when real disease of the kidneys exists, is that pointed out by Mr. Robinson and Dr. Brown-Séquard,—viz., the obstacle to the return of blood from the kidneys presented by the gravid uterus,—and that the cause of the dropsy is the still greater impoverishment of anæmic blood by the loss of albumen.

There evidently existed in these cases the condition most favorable to the occurrence of convulsions,—an anæmic state of the nervous centre, more particularly of the excitable motor tract. This condition has been called by Wigand "*convulsability*," and by Dr. W. Tyler Smith "*convulsive erethismus*." It has been well portrayed by Dr. Marshall Hall, and recognized by other observers, as depending on impaired nutrition. An anæmic condition of the sanguine system, by which nutrition of the nervous centres is not fully maintained, may be considered as a primary cause of inordinate susceptibility to the impression of remote influences. This anæmia, irrespective of its being a state peculiar to pregnancy, may be so increased, in an individual already laboring under it, as to produce inordinate liability to abnormal disturbances, as is shown in the case of direct loss of blood, or in what is closely allied to it,—the long-continued discharge of albumen through the kidneys. Albuminuria is so closely allied to hemorrhage that it may properly be placed in this class of affections.

The immediate cause of the convulsive movements in the first case may be regarded as the reflex action from the perineum. Although the eccentric origin of puerperal convulsions has been surmised by able practitioners, as Drs. Robert Lee, Ramsbotham, Churchill, and Locock, this origin has by no writer been so intelligently applied and illustrated as by Dr. W. Tyler Smith. The sources of convulsions induced through reflex action that have been enumerated by Dr. Smith are the irritation of the uterus connected with gestation or labor, the irritation of the hand in the uterus, the pressure upon and distention of the vagina during the passage of the child, the distention of the os externum, and the irritation to any of these parts from the use of instruments. Reflex action may also be engendered from the stomach, the bowels, or the bladder.

Another feature of these cases was the absence of premonitory cerebral symptoms. The attack of convulsions was preceded by paleness of the face, swooning, and loss of consciousness, indicative of a failure of supply of blood to the brain. Although precursory symptoms do precede convulsions in many cases, it is not an invariable rule that they should be manifested.

There may be, for some time preceding delivery, headache and throbbing, giddiness and flushing of the face, with a rapid or even a tense pulse, which symptoms are as much the result of an anæmic condition of the system as of a plethoric one. The true nature of these symptoms has been admirably set forth by Dr. M. Hall, and, as stated by Dr. W. Tyler Smith, "they are the signs of what may be termed the convulsive erethismus."

Until within a comparatively recent period the doctrine taught by obstetrical writers was that convulsions were of a sthenic character, and that they were produced by determination of blood to the brain. Smellie, Burns, Merriman, Blundel, Rigby, and Churchill, as well as Dewees and Meigs, all proclaimed this doctrine with respect to puerperal convulsions, while Solly argued that such was the cause of convulsions generally. The experiments of Burrows have placed this, however, in its true light, and shown that determination of blood to the head is productive of oppression, stupor, and coma,—symptoms of inordinate pressure and fulness within the brain which are not compatible with convulsions. Dr. Denman saw the fallacy of attributing convulsions to a fulness of the vessels of the head, and expressed himself thus: "This opinion applies to a cause very general indeed, and, if true, must have had its effects so generally as not to remain in doubt. But they [*i.e.* convulsions] sometimes first come on or continue with equal violence after the birth of the child, when the presumed cause is removed." The cases reported certainly are not illustrative of determination of blood to the head as the cause of convulsion.

That convulsions do not originate in plethora or from determination of blood to the brain was known to Hippocrates, who refers to convulsions, after labor, from hemorrhage. It was also the teaching of that wise physiologist Fontana; and yet it has been asserted that they occur from fulness of the vessels of the head in the face of these statements, and, more recently, of the experiments of Sir Astley Cooper, who by tying the carotids and compressing the vertebral arteries brought on convulsions in animals as an inevitable result. Such occurrence has been the result of tying the carotid artery in man. The effects of hemorrhage in occasioning convulsions have recently been investigated by Kussmaul and Tenner. In their interesting experiments upon animals, it was found in every instance that the substance of the brain, as well as of the medulla oblongata and the upper part of the spinal cord, was deprived of blood, the cut surfaces being without blood-spots, and the arteries of the cranium empty.

The resemblance of puerperal convulsions to epilepsy cannot but be apparent to all observers. Dr. M. Hall states that "this convulsion itself resembles epilepsy." Trousseau has boldly expressed the opinion that no difference exists between eclampsia and epilepsy. For an analysis of the phenomena of epilepsy the medical inquirer can turn to no authority with more satisfaction than to the treatise of Dr. Radcliffe; he is the first author who has traced out with precision the successive stages of epileptic convulsions and the connection between these stages and the state of the nervous centres, the circulation, and the respiration.

The first symptoms to be noticed in the attack of convulsions are pallor of the countenance, depression if not actual loss of pulse, loss of consciousness, and syncope. The convulsive movements commence in the muscles of the eyes, of the face, of the throat, and finally extend to the entire system. From the time that the muscles of the throat, involving the larynx (laryngismus of Dr. Hall), are involved, the face becomes livid, the minute vessels are swollen and finally cyanosed, the eyes and the lips assume a purplish hue, and gradually asphyxia is established, with less and less of

convulsive movement, until this disappears under the engorgement of the brain with black blood. The subject of the fit is then comatose. The pulse, which had been depressed or lost in the first stage, becomes more perceptible as the convulsions proceed, rapid at first, and full and slow as coma is established. As the blood, which had been thoroughly venous and charged with carbonic acid, regains oxygen, the symptoms of asphyxia disappear, and the brain, as it is relieved from pressure, regains its wonted activity; there is then a return to consciousness. It would appear from the course pursued by them that convulsions are self-limited; and we can agree with the statement of Robin "that the attack itself originates a cause which puts an end to it, and allows it only a short duration." The convulsion is cured by a species of *natural narcotism*. In the first of the cases reported, the above were clearly the phenomena presented. Whenever there was full oxygenation of the blood, with a restoration of color in the face and a return of consciousness, it was the precursor of a renewed attack, with precisely the same series of events. It is probable that continued recurrence of the attacks arose from the additional exhaustion attendant upon loss of blood after delivery of the placenta.

The question now arises, Does the reflex influence, from whatever source generated, operate directly upon the muscular system through the sensory (excitor) and motor tracts of the brain and spinal marrow, as in the case of twitches produced in a limb by pinching the peripheral nerves, or does it act through the medium of some organ or structural apparatus which controls the nervous system and thus indirectly leads to the occurrence of convulsions? Keeping in view the influence of reflex action, we have presented to us the phenomena of paleness of the face, loss of consciousness, and syncope, which are dependent on suspension of the circulation of the brain, a result that must come either from stoppage of the movements of the heart, or from contraction of the capillary arteries of the brain itself. The occurrence of convulsions by direct pressure upon the vessels furnishing blood to the brain, as in the experiments of Sir Astley Cooper and Kussmaul and Tenner, the production of them by hemorrhage, and the loss of pulse with syncope preceding them, clearly point to a failure of the heart's action as their immediate cause.

Many facts confirm the conclusion that the arrest of the heart's action is produced by reflex action. The sudden death from cold water introduced into the stomach under certain circumstances, and the effects of shock from a blow upon the stomach or testes, are instances in point of sudden suspension of the movements of the heart. Dr. Brown-Séquard states that he made a great many experiments which show positively that a sudden excitation of the abdominal sympathetic sometimes kills and often diminishes the movement of the heart by reflex action. It must be through the connection with the spinal cord. This is proved by the fact that a section of either the par vagum or the spinal cord or the splanchnic nerves allows any kind of irritation to be made on the abdominal sympathetic without a stoppage of the heart taking place. Legallois and Wilson Phillip determined by their experiments that the heart is under the control of the spinal marrow. The interruption of the heart's action by galvanism to the pneumogastrics, as shown by the experiments of Weber and Budge, has been confirmed by Schiff, Hoffa, Ludwig, and Bernard. Where the heart is feeble from constitutional peculiarities, or from exhaustion and anæmia, the influence of reflex action must be more decided, as under such circumstances that organ is more impressible. Some interesting cases of the influence of reflex action on the heart have recently come under my observation: one, of a gentleman subject to convul-

sions of recent origin, who also labors under disease of the alimentary canal, with excessive sensibility in the right hypochondriac region. On suddenly impressing this region by the hand, as has been done on examination by palpation, his pulse temporarily disappears, the beat of his heart appears checked, and he is thrown into convulsions. Another case is that of a lady who has cancer of the uterus, in whom the pulse vanishes and convulsions ensue whenever the parts are dressed or examined.

It is interesting, in connection with the facts stated, to remark that when sedative agents are employed largely and convulsions follow, the impression upon the heart has been so decided as almost to obliterate its movement. When ether is exhibited, the first impression of sedation is attended with marked depression of the circulation, the disappearance almost of the pulse, and convulsive movements, which are succeeded by entire anæsthesia and by a purple hue of the lips and face, with gradual rising in force of the pulse until it becomes slow and full. Experiments on animals show that convulsions can be produced by such potent sedative medicines as veratrum, aconitina, etc. A case of the effects of an overdose of veratrum viride has lately fallen under my notice. The subject was an aged physician, who, for heart-disease, was in the habit of taking this remedy. At the time I saw him his pulse was not perceptible, the most feeble impulse was given by his heart, his face was pale, and his skin cold and leaking. Weak convulsions occurred every few minutes, with stupor and quiescence, after which there was a return to consciousness. This state continued for an hour or more, until reaction was fairly accomplished by potent stimulation. When his heart beat fully and the pulse returned, the convulsions disappeared.

Mental emotions are sometimes the cause of syncope and stoppage of the heart's action, followed by convulsions, in puerperal cases. Instances of emotional causes are given by Mauriceau, Merriman, and others. Dr. W. Tyler Smith gives an instance in which a husband returned from a perilous journey a day or two after the delivery of his wife, when the sight of him threw her into convulsions. Fright is sometimes the occasion of similar attacks.

Other facts may be adduced in confirmation of the view that has been taken with respect to stoppage of the heart's action being the originating cause of convulsions. If a gaseous fluid, as atmospheric air, be thrown in large quantity into the jugular vein of an animal, the effect is an interruption of the heart's action; the animal becomes pulseless, and convulsions ensue. This was invariably the case in the experiments of Nysten. If the air be introduced gradually, so as to slowly distend the right cavities of the heart and weaken its parietes to the extent of not being able to maintain the circulation, the brain is slowly deprived of blood, and what is furnished to it is non-aerated and venous. In this case the animal dies of asphyxia without convulsions. Nysten produced analogous results when oxygen, nitrous oxide, and carbonic acid were introduced,—in large quantities suddenly with convulsions, and in smaller quantities gradually with asphyxia. It is clear from these experiments that the sudden interruption of the heart's action was the precursor and the cause of the convulsive attacks. When instead of throwing atmospheric air into the vein it was thrown into the carotid artery, apoplexy without convulsions was the consequence, due to inordinate pressure on the substance of the brain.

The introduction of air into the circulation with the result of producing convulsions is well known to surgeons as happening in operations on the neck. This has been treated of by Amussat.

The second cause alleged for the abstraction of blood

from the brain is contraction of the arterial capillaries, produced by excito-motory influence through the sympathetic nerves, controlling capillary circulation. When seeking for an explanation of the cause of epileptiform convulsions on the principle that a stimulus is necessary to the motor tract in order to produce them, Dr. Brown-Séquard supposes that while there is contraction in the arterial capillary system by which the blood is expelled from the brain, there is congestion in the veins of the central upper motor tract, whereby stimulation is engendered from the carbonic acid gas in the venous blood. In this supposition the condition of the heart and general circulation is overlooked; and, with respect to the fact that there is congestion at the base of the brain, it must be recollected that in the experiments of Barrows, Donders, Kussmaul, and Tenner the brain was deprived of blood when death with convulsions occurred from hemorrhage.

The order, moreover, in which phenomena occur in cases of convulsions is incompatible with their production by venous blood. Under hemorrhage this is lessened in quantity when convulsions appear, and it is increased in amount from congestion of the brain at the time the convulsions disappear. It cannot be supposed that the venous blood present at the base of the brain at the time the circulation is interrupted, either by stoppage of the heart's movements or by contraction of the capillary vessels, is capable of producing convulsions, as a normal amount of venous blood is incapable of inducing such result, much less a smaller quantity. This, moreover, would imply that the arterial blood is a counter-agent of the venous. It cannot, again, be supposed that there is an increase of the venous blood under contraction of the arterial capillary vessels, or under suspension of the action of the heart. An augmentation of venous blood with its assumed irritant, carbonic acid, in the vessels of the brain, cannot be admitted; and with respect to the hypothesis of capillary contraction, there is little probability, from the foregoing exposition, that it can be considered an element in the production of convulsions.

It now remains to speak of the part that is played by carbonic acid in the closing scene of a convulsive attack, in which the muscular disturbance is succeeded by stupor and quiescence. The irrespirable character of carbonic acid gas has been known from its first discovery. Bichat and Nysten supposed that its effects were negative, and that, while innocuous in itself, its injurious impression was due to the exclusion of the vitalizing pabulum, oxygen, from the lungs. The experiments of Seguin, Rolando, and Collard de Martigny, however, have demonstrated that carbonic acid is an active agent, capable of producing a comatose condition of the brain. The carbonic acid is not actually produced in the lungs by the introduction of oxygen into them; it is the result of chemical changes in the tissues where oxygen has penetrated, and is exhaled from the blood through the lungs by the displacing power of oxygen. If oxygen is not afforded to the blood by respiration, the carbonic acid is not exhaled, and black blood is circulated through the organs. All of the carbonic acid brought to the lungs by the blood is not exhaled, and the arterial blood that is returned to the brain contains a definite proportion of it. The proportion as ascertained by Magnus was 71.6 for venous and 62.3 for arterial, while with respect to oxygen he found that arterial blood contained 23.2 and venous blood 15.3. There is a tolerance, therefore, on the part of the brain, of a definite amount of carbonic acid.

It is now conceded that an attack of convulsions proceeds from above downwards; which indicates that the motor tract of the brain, as well as of the medulla oblongata, is involved in their production, Dr. Marshall Hall,

in describing the sequence of convulsive movements, after specifying the eyes and features as being primarily affected, states that the second series of symptoms are a forcible closure of the glottis, and respiratory efforts. The closure of the glottis is effected by convulsive lifting of the rima glottidis against the epiglottis, which constitutes the mechanism of laryngismus. When asphyxia from this cause is fairly established, the convulsions succumb to the narcotism from venous blood and the impediment to its return to the circulation. When this is fully relieved, and the blood becomes aerated, there is a return to consciousness.

An interesting confirmation of the foregoing exposition is afforded by the recent investigations of Dr. H. C. Wood. It is well known that when veratrum is exhibited, either by the stomach or hypodermically, convulsions follow. Dr. Wood, after administering this article, placed the animals in a box containing carbonic acid gas, with the result of producing asphyxia and death without convulsions. When taken from the box, or when the supply of gas was not sufficient to maintain the narcotism, convulsions were induced.

We shall now examine the question of the so-called state of the system, "uræmic intoxication." When the demonstration was made that parturient women attacked with convulsions labored under albuminuria, the assumption gained ready credence that, as there was a diminution of urea in the urine in that disease, the retention of this principle was the cause of convulsive attacks, and hence the terms were adopted of "uræmic intoxication" and "uræmic convulsions."

There is no doubt that urea does exist in the blood in some cases, and has been detected, as by Bostock, Christison, Simon, and Rees, while, on the other hand, Quevenne, Lecannu, and Becquerel failed to discover it. It is thus seen that its presence in the blood in albuminuria is not an absolute fact. The amount of urea detected in the blood is also so small as hardly to warrant the idea that it is capable of producing so violent a disturbance as convulsions. Dr. Rees, who of all the experimenters most definitely determined the actual amount of urea in the blood, rejected the hypothesis that its presence was the cause of nervous symptoms in albuminuria, because the symptoms and the amount of urea bore no relation to each other. The retention of urea in the blood has been supposed to occur in consequence of its non-discharge by the kidneys. This supposition is predicated on the assumption that the full amount of urea is formed in the blood, and that the kidneys are embarrassed in the performance of their eliminating operations. If urea is a product of the decomposition of the animalized elements of the blood and the tissues, whether originating in the metamorphosis of the albuminous elements, as supposed by Robin, or of the gelatinous, as supposed by Prout, or of all the nitrogenized matters, it is clear that the amount of it produced in the system must be less under an anæmic condition of the blood and impaired nutrition of the tissues with debility than where there exist a rich normal composition of the blood, full nutrition of the tissues, and general vigor of body. The constant hemorrhagic drain of albumen is certainly not conducive to the generation of urea within the body.

But the fact is not established with respect to there being a deficiency of urea in the urine proportionate to the amount formed in the blood. In the reports of cases of convulsions connected with albuminuria, the fact has been assumed of a deficiency of urea in the urine, and on it has been based the theory of uræmic intoxication. The urine in albuminuria may properly be termed "anæmic urine." It is of low specific gravity, and poor in the nitrogenized elements peculiar to healthy urine. It is the exponent of the condition of the sys-

tem, and indicates a deficiency of nutritive material, as well as a want of vigor in the metamorphic processes that are connected with nutrition; and we may assume, with Thudichum, that "the amount of urea is the measure of the most important of the changes of matter in the system." Simon found that urea amounted on an average to about one-third or less of the organic constituents, exclusive of albumen, whereas in healthy urine it constitutes one-half. This was also the result in the examinations made by Becquerel. In two cases of puerperal convulsions attended with albuminuria, I found the amount of urea in the urine to correspond to the statement of Simon. In the first case reported, the proportion was .0008, or one-third the normal amount of solid elements.

It can be shown that urea may exist in the blood without the occurrence of convulsions. Prevost and Dumas removed the kidneys from dogs and cats, and no effects were manifested before the third day, when vomiting and fever set in and the animals died in a state of depression. Ségalas found urea in notable quantity in the blood of a dog sixteen hours after extirpation of the kidneys. Vauquelin and Ségalas injected urea dissolved in water, to the extent of a drachm, into the vessels of an animal, without any disturbance but of the circulation and respiration, attributed to the sudden introduction of the fluid (two ounces). Quevenne found urea in the blood of a woman laboring under disease of the heart in its last stages of dropsy. Upon autopsy, the kidneys presented no alteration, and the urine did not contain albumen.

Ségalas regarded urea as a diuretic, as frequent urination followed its employment. Gallois found that when urea was given to rabbits it passed into the urine in half an hour. Dr. Tanner employed urea as a diuretic. Dr. Hammond repeated the experiment of throwing urea to the amount of a drachm, diluted in four ounces of water, into the jugular vein of a dog. After some slight disturbance, the dog went to sleep, and awoke in two hours perfectly well, when he passed a large quantity of urine. Frerichs, as had been previously done by Bichat, Courten, and Gaspard, repeatedly injected from twenty to forty grammes of filtered human urine, sometimes with the addition of urea, without any ill effects. He refers to a case of a man laboring under granular degeneration of the kidneys, who, in consequence of pericarditis, was bled, the blood containing more urea than he had ever seen in that fluid, without manifesting symptoms of uræmia, so called.

If a very large quantity of urea be injected, convulsions may ensue. This was the case in the experiments of Dr. Hammond, and also of Frerichs; but it also happens when nitrate of potassa, sulphate of soda, and aqua ammoniæ are injected by the jugular veins. The impression upon the heart was not noticed in these experiments; and, from the exposition that has been made of the phenomena that occur in cases of convulsions, there can be little doubt that this was the starting-point of the disturbance of the nervous system, as in the instances where gaseous bodies were thrown into the circulation.

With respect to the retention of urea in the system from the obstructed state of the return-vessels of the kidneys, on which depends the separation of albumen, it may be stated that urea is one of the most soluble of substances, dissolving in its own weight of water. It can be excreted in any fluid of the body,—is sometimes passed in the perspiration, and often in the fluid of dropsy. No reason can be given to explain the passage of albumen through the vessels of the kidneys to the exclusion of urea and other soluble substances; and from the researches of Becquerel it would appear that in albuminuria the richness of urine in albumen, urea,

and other solids comports with the whole amount of fluid discharged. Frerichs was so satisfied from his experimental researches that the presence of urea in the blood did not account for convulsions, that he resorted to an explanation based on the supposed conversion of urea into carbonate of ammonia in the blood. He was led to this supposition from the presence of ammonia in the expired air and in the secretion of animals that had been nephrotomized and urea injected into their vessels. This has not, however, been found by other experimenters. If carbonate of ammonia be thrown into the circulation, so as decidedly to impress the heart and stop its movements, convulsions may result. Carbonate of ammonia is a stimulant that may appropriately be used in cases of convulsions.

The purpose of this paper is to set forth more especially the features of convulsive attacks in connection with pregnancy, and to present the facts derived from the most authoritative sources, which, when collected and arranged in accordance with their proper relation to one another, afford a rational explanation of the mechanism of the affection. It is only by co-ordination of the truths arrived at by many reliable observers and experimenters that a correct comprehension of so complicated an affection as convulsions can be attained.

Our remarks could have been much extended, but the limits allowed us precluded more amplification than has been given. In connection with the treatment, the subject may again be resumed.

A LOCAL OUTBREAK OF TYPHOID FEVER.

BY JOHN S. PARRY, M.D.

IN June, 1869, the writer was called to see a member of a poor family, living in Herald Place, in the eastern part of the city. It is "a blind alley," containing but four houses, which are all situated upon the north side of it.

Ledger Place and Lagrange Place are in the immediate vicinity of Herald Place: the former was at the time in the worst possible sanitary condition. Herald Place was paved with brick, and clean. At its western extremity, and immediately in front of the house in which the typhoid fever first appeared, was a privy.

At the east end of the alley was a hydrant, which was used in common by the families in all the houses of the court. This water was therefore a part of the ordinary supply of the city, and it is not likely that it could have been impregnated with any poison.

The third and fourth houses in the alley were those in which the fever occurred. Both are four stories high, with two small rooms on each floor above the first.

In the early part of May (the date cannot now be definitely fixed), the privy at the western extremity of the court was cleaned,—the first time that it had been disturbed for several years.

The family living in No. 4 consisted of nine persons,—the father, mother, and seven children. About the 20th of the month, the eldest of the latter, a son aged twenty years, began to complain, and eight days later he had fully-developed typhoid fever. A few days afterwards a daughter was attacked, and in a short time the whole family, excepting the father, mother, and their youngest child, an infant at the breast, had the disease.

The younger children had it mildly, and three of them, whose ages varied from three to ten years, scarcely went to bed. A son, sixteen years old, only recovered after a most severe attack. It is probable

that both the father and mother had the disease early in life.

In the third house there were several cases, one of which the writer saw. They were all under the care of another physician. At least one of them was very severe. The residents of the first and second houses all escaped, although among them were several persons who had never had the disease.

At the time that these cases occurred in Herald Place there was no typhoid fever in either Ledger Place or Lagrange Place.

The interesting feature of this local outbreak is its obvious cause. So many writers have traced the cause of typhoid fever to the products derived from decomposing fecal matter, that the origin of the disease in these is now a demonstrated fact. In most instances, however, as in the recent outbreak of the affection at Islington in Great Britain, the poison has entered the system through the alimentary canal; but in these cases it seems to have gained admission through other channels, or at least we are unable to demonstrate that the ordinary ingesta of the patients contained the poison.

The water which they used was not the vehicle for all of the four families in that court, and, if we are not mistaken, two or three on the north side and to the extreme west of Ledger Place were supplied from the same hydrant; yet only the inhabitants of houses Nos. 3 and 4 were attacked.

The disease seems to have originated directly from the emanations from the privy at the time it was cleaned. These were very offensive, and, as it was cleaned at night, it is interesting to remember that those members of the two families who occupied the front rooms of the houses Nos. 3 and 4 that night suffered most severely from the fever.

The privy was nearer to No. 4 than to any other house in the court, and in it the worst cases of the disease occurred.

CASE OF ANGINA PECTORIS,

ACCOMPANIED BY AN EXTENSIVE INTERNAL DEPOSIT OF FAT.

BY DR. PRICE,

West Chester, Pa.

G. T. W., æt. 69, married, a farmer, was temperate, of a bilio-sanguine temperament, without hereditary taint. The prominent symptoms were a peculiar scalding pain in the trachea, increased by exertion, dyspnoea, and intense pain in the region of the heart and stomach. These symptoms supervened directly upon protracted over-exertion eighteen years ago. He was engaged for two days in feeding heavy grain to a threshing-machine, and, being short in stature, he was compelled to work continuously with his shoulders elevated. Acute symptoms came on immediately, and he was never well afterwards. At this time he was not burdened with fat. Cupping or blistering the upper part of the spine always afforded some relief. The attacks of pain and dyspnoea after exertion were frequent, and sometimes precluded all movement for several hours. His digestion was always slow and difficult.

On the 25th of July, 1871, he was attacked with a slight paralysis of the left side; the leg being scarcely affected. Sensation was more impaired than motion. A scalding sensation was present in the skin of the left arm. A catheter was used during a month. The glosso-pharyngeal nerve was most affected; two weeks elapsed before he was able to swallow anything. The power of deglutition then slowly returned; but it was only within a few weeks of his death that he could swallow solids without washing them down with fluids.

The attacks of pain and dyspnoea gradually increased in frequency and severity. Cœdema of the extremities and slight effusion in the abdomen and chest occurred late in the case.

The heart-sounds were distant and feeble; the rhythm imperfect; no decided murmur; it was difficult to separate the sounds. The physical signs some weeks before death seemed to indicate œdema of the lungs rather than hydrothorax. The dullness upon percussion was not complete, and did not seem influenced by position. The respiratory murmur was feeble, and accompanied by slight moist râles.

For several weeks before death, the gastric distress and that from defective arterialization of blood were intense. The urine towards the last was slightly albuminous.

He died at 4 A.M., August 2, 1871. The autopsy was made on the 4th, with the assistance of Dr. Massey. Six ounces of clear serum were found in the abdomen, eight in the right pleura, and one in the pericardium. The heart was somewhat atrophied; the right auricle dilated. The muscular tissue had undergone fatty degeneration. The valves were normal, except as to a slight incompetency of those of the right side. There was no appreciable change in the coronary arteries. Extensive pleuritic adhesion existed. The lungs were œdematous; some of the lobules were collapsed. The liver, spleen, and kidneys were enlarged and fatty. The stomach was atrophied.

The most remarkable feature in the case was the enormous accumulation of fat internally. The parietes were not thicker than is very frequently observed; but in the mediastinum, upon the outside of the heart, along the inside of the ribs, below the diaphragm and overlying the stomach, and in the mesentery, the deposit was enormous, and as firm as the kidney-fat of beef. The omentum was not much loaded with the deposit.

Remarks.—The spine probably sustained some injury about the origin of the eighth pair of nerves or of the spinal accessory nerves, and during the later period of his life the suffering was doubtless greatly enhanced by the presence of the fat accumulated upon the pneumogastric nerve and upon the ganglia of the sympathetic system.

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

SURGICAL CLINIC OF F. F. MAURY, M.D.,

Lecturer on Cutaneous and Venereal Diseases in the Jefferson Medical College, etc.

September 13, 1871. (*Continued.*)

Reported by Ralph M. Townsend, M.D.

PHIMOSIS COMPLICATED WITH CHANCER BENEATH THE PREPUCE.

THIS man suffers from phimosis, and he states that prior to the occurrence of this condition he had a chancre under the foreskin. The primary sore was contracted about ten weeks ago, and it has therefore existed long enough to produce contamination of the system, if this is a part of its course. Forty days, as a general rule, is the time allowed for the development of secondary syphilis. The time that has elapsed, then, warrants the opinion that either the poison has become neutralized or the sore has lost its virulence. Cutting open the foreskin, therefore, now offers this man his best chance of recovery.

There is a little adhesion at the frænum, and the surrounding parts are much infiltrated, owing, probably, to the chancre making its appearance in this situation. The propriety of removing the foreskin, or turning it back by slitting, is at once suggested here. Phimosis offers the greatest possible obstacle to a cure either in chancre or gonorrhœa; and when a man in this condition has sexual intercourse, acid secretions from the vagina accumulate around the glans penis and set up a spurious gonorrhœa or balanitis. The old law of Moses, in reference to circumcision, saved many a man from one or more of the various forms of venereal disease.

Dr. Maury stated that Dr. Packard, when preparing statistics relative to this subject, applied to him for the result of his observations as to the frequency of disease in cases where there was a long foreskin. Dr. Maury found that he had

notes of one hundred and thirty-five cases of venereal disease, and only eleven of that number were Jews or men with short foreskins; whereas all the others were men with long foreskins.

This patient has also great difficulty in micturition, and he is frequently compelled to pass a catheter. This condition is also an impediment to impregnation, on account of the ejection of semen being difficult and imperfect. After phimosis has existed for a long time, the inner surface of the long foreskin becomes inflamed and adherent to the glans penis. To remedy this condition, the foreskin has to be peeled off from the glans like the skin from an onion. Sometimes this operation is not at all easy, especially after it has been long deferred. The patient was put under the influence of chloroform, and the prepuce drawn forwards, and cut off obliquely from above downwards. This allowed the cutaneous portion of the foreskin to retract while its mucous facing still clasped the glans. A grooved director was now introduced between the head of the penis and the portion of foreskin that embraced it, and swept around, so as to break up any adhesions that might exist. Care must be taken that the instrument be not introduced into the urethra, for in that case the latter might be split open in the second portion of the operation,—viz., slitting up of the mucous facing of the foreskin. The flexible grooved director having been rightly introduced, the mucous foreskin was slit up, turned over like a rolling collar, and then tacked to the previously-retracted tegumentary portion of the foreskin. Previously to this the infiltrated portion of the foreskin was trimmed away with the scissors. Where the chancre existed the interval thus left is too great to stitch, and the parts will have to heal by granulation.

If this patient had presented himself when the chancre was but two weeks old, or less, this operation would not have been performed, because the parts then would have been much more susceptible to the propagation of syphilis, and the sore itself would have been more active. A vast chancre, extending around the whole cut margin, might have probably resulted. The site of the present sore will be touched occasionally with dilute nitric acid, one part to three or four of water.

SYPHILITIC CARIES.

This woman illustrates tertiary syphilis affecting the tibia. She had primary syphilis six years ago; and when the affection has reached this stage the tibia is one of the bones most liable to be affected. So, also, the clavicle, the frontal bone, the ulna, and the sternum are likely to be the seat of tertiary disease, and in about the order mentioned. Syphilis assumes various forms when it attacks the bones. Sometimes a node is found seated without the periosteum, in the subcutaneous cellular tissue, where it is known as a gummy tumor. Again, a node may exist between the periosteum and the bone, and, on account of the fibrous substance of the former being very firm and strong, when an effusion takes place beneath it, its long retention causes intense pain and ultimate destruction of the bone. Finally, syphilitic osteo-mylitis may exist,—an affection which begins in the bone-substance. As results of these various conditions, thickening or eburnation, on the one hand, and a honeycombed state of the bone, on the other, may be brought about.

But when one meets an indolent flaccid ulcer like this, which has no tendency to heal, it is unnecessary to stop to inquire to which of these conditions it owes its origin. It can be seen that the bone beneath is superficially dead,—carious; it can hardly be said to be necrotic, as such a term would signify its death in mass.

The bone was cut down upon, and found to be much softened by interstitial lymph-deposit. An ordinary carpenter's chisel was used to gouge away this soft material, the ear being meanwhile used to tell when the operation had been carried to sufficient extent,—the gritting sound denoting when healthy bone had been reached. The edges of the ulcer were well trimmed and all its unhealthy granulations were cut away, and thus the parts were put in condition to throw out healthy and organizable lymph. The wound will be covered with a plain, simple dressing, and the ulcer will occasionally be touched with the dilute acid nitrate of mercury,—one part of the acid to eight or ten parts of water.

Erysipelas seldom occurs after these operations.

WILLS OPHTHALMIC HOSPITAL.

SERVICE OF GEORGE C. HARLAN, M.D.

Reported by Charles K. Mills, M.D.

PARALYSIS OF THE SPHINCTER PUPILLÆ, WITHOUT PARALYSIS OF ACCOMMODATION.

W. C., æt. 18, was struck in the left eye with a large pebble. When he applied for treatment, the day after the accident, the conjunctiva was much injected, and there was a clot half filling the anterior chamber. The sphincter pupillæ was paralyzed. The pupil was immovable, and irregularly dilated to three-sixteenths of an inch, its longer axis being oblique. The acuteness of vision, tested by Snellen's Types, was $\frac{20}{XL}$. The accommodation was unaffected, being found, when tested by a strong convex glass, to equal one-fourth.

Rest and moderate regimen were enjoined, blood was several times taken from the temple by the artificial leech, ice-cloths were applied to the eye, and at the end of a week the paralysis was overcome and the vision normal, equalling $\frac{20}{XX}$ Sn.

STAPHYLOMA OF THE CORNEA AND IRIS.

F. B., æt. 8, was admitted into the hospital for traumatic cornitis of the right eye, the result of a blow with a stone thrown by another boy. The cornea sloughed and the iris protruded. When the patient was discharged, three weeks afterwards, he was free from pain and the inflammation had subsided, but there were indications of commencing staphyloma.

Two weeks later he returned almost in a typhoid condition, with violent headache, insomnia, without appetite, suffering from constant nausea, and looking very weak and haggard.

A renewed attack of inflammation in the eye had supervened, involving the ciliary region. The staphyloma was slowly increasing, and there was considerable irritability of the other eye, with photophobia.

He was readmitted to the hospital, and the front of the eye was removed by the method recommended by Prof. Knapp. A needle (holding a black thread, so that it might be seen beneath the conjunctiva and avoided in the subsequent cutting) was passed under the conjunctiva, at a point behind the intended line of incision, and brought out and reintroduced at convenient intervals until the thread was passed completely around the base of the staphyloma, in the subconjunctival tissue, the two ends hanging out together. The staphyloma was then excised by means of the knife and scissors, and the opening closed by drawing upon the threads, which brought the lips of the incision together, puckering the conjunctiva like the mouth of an old-fashioned purse.

The constitutional symptoms immediately subsided, the boy sleeping well the first night after the operation. He was finally discharged, two weeks after the operation, with an excellent stump for an artificial eye.

INJURY FROM MOLTEN IRON.

J. M., æt. 35, a laborer in a rolling-mill, was struck in the eye with some molten iron. General ophthalmia ensued. There was extensive symblepharon of the lower lid, and anterior staphyloma was forming rapidly. The eye was soon converted into an abscess. The patient suffered terrible pain, intensified by the dragging of the adhesions of the lid to the ball, when the injured eye attempted to follow the motions of the other. Sympathetic ophthalmia was commencing. The lower lid was dissected from the eyeball and the abscess evacuated, and the staphyloma at the same time removed by abscission of the front of the eye. The operation resulted in the entire relief of the patient.

COMPOUND MYOPIC ASTIGMATISM.

Miss A. P., a school- and music-teacher, æt. 22, complained of near-sightedness and of congestion and pain in the eyes. She said her defective vision had within a year rapidly increased, and for about this time she had been using eye-glasses for distance, which were found to be one-tenth sphericals.

By Snellen's Test-Types, her acuteness of vision in the right eye was discovered to be only $\frac{2}{CC}$. Ophthalmoscopically, an extensive posterior staphyloma was diagnosed, the characteristic white crescentic zone at the edge of the optic disk being quite large, and showing a progressive tendency. It was deemed advisable not to attempt to correct this eye by glasses.

Her acuteness of vision in the left eye was $\frac{18}{CC}$. By the ophthalmoscope, a commencing staphyloma was diagnosed.

On testing with spherical and cylindrical glasses, with Green's astigmatic diagrams, and with Thomson's disk, she was found to have a myopia of $-\frac{1}{2}$ in the principal horizontal meridian, and of $-\frac{1}{5}$ in the principal vertical meridian, making an astigmatism of $-\frac{1}{10}$.

She was ordered a glass consisting of a $-\frac{1}{2}$ spherical combined with a $-\frac{1}{10}$ cylindrical, which brought the vision up to $\frac{20}{XX}$. Placing a $+\frac{1}{4}$ spherical before this combination, music could be read with ease at two feet: adding a $+\frac{1}{4}$ to the combination, gave a $-\frac{1}{4}$ spherical combined with a $-\frac{1}{4}$ cylindrical, which was ordered for music.

The lenses were directed to be set in reversible frames, so that, the right eye not being in use, either glass could be placed before the left, at pleasure.

An interesting point in this case was the fact that the patient, before the correction above given, was in the habit, to a great extent, of overcoming her astigmatism by her mode of managing the inclination of the plane of her glasses, the angle of the axis of vision, and the position of her head. In this way, with her old spherical glasses, she could get a vision of $\frac{20}{XXX}$ while, with head erect, and the optic axes at right angles to the plane of the glasses, she could only obtain $\frac{20}{LXX}$.

CORRESPONDENCE.

TO THE EDITORS OF THE PHILADELPHIA MEDICAL TIMES.

TO those who wish to avail themselves of the medicinal powers of ol. morrhue and iodide of iron at the same time, the following recipe will be valuable. I have used the combination for some time past, and am happy to be able to recommend it to the profession. It is a stable compound, and of a beautiful dark-red color:

R Iodide of Iron, gr. lxiv;
Ether sulphuric, q. s.;
Cod-Liver Oil (clarified), Oj.

Dissolve, in a mortar, the iodide of iron in a slight excess of ether, and add the oil gradually, stirring with the pestle rapidly until the mixture is complete. Keep in a tightly-corked bottle.

The proportion here given is half a grain of the iodide to one drachm of the oil, which is the dose in which I have been prescribing it. It may be increased, however, to $f\text{ss}$, if necessary.

Yours respectfully,

J. CUMMISKEY.

2107 ARCH STREET, October 25, 1871.

CHLORAL IN INCONTINENCE OF URINE.—Dr. Tonson (*Gazette Hebdomadaire*, October 6; from the *Gazetta Medica Italiana Lombardia*, No. 10, 1871) recommends chloral in the treatment of this affection. It should be given at bedtime, in doses of fifteen grains to children of from ten to fifteen years of age. Generally a cure will be effected after four or five days of treatment.

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WEDNESDAY, NOVEMBER 15, 1871.

EDITORIAL.

AN APPEAL FOR THE PHYSICIANS OF CHICAGO.

A MEETING of the physicians of this city was held at the Hall of the College of Physicians on Wednesday, October 24, at which a committee was appointed for the purpose of soliciting subscriptions from members of the profession and others for the physicians of Chicago. From a letter recently received in this city from Dr. N. S. Davis we learn that fifty of the regular practitioners of that city have been rendered entirely destitute by the late fire, and that from thirty to forty more have lost nearly all their books, instruments, and office-furniture, but are not destitute in other respects. Good standard works in the practical departments, and surgical instruments, he says, are very much needed by the sufferers. Although it is but a short time since the appointment of the committee, we learn with pleasure that several handsome subscriptions have been received, and that it is probable that quite a large sum will be raised,—part of which, we hope, will be sent to the Northwest, where many physicians have also suffered severely by the recent fires. As all the members of the profession in this city and its vicinity will desire to contribute to this object, we may add that subscriptions may be sent to H. Lenox Hodge, M.D., 901 Walnut Street, *Chairman*, J. L. Ludlow, M.D., 10 Merrick Street, *Treasurer*, or Wm. B. Atkinson, M.D., 1400 Pine Street, *Secretary*, of the Committee.

LEADING ARTICLES.

THE CENSUS OF 1870.

SCATTERING figures, here and there semi-officially published, tell of the numerical importance of growing villages and populous cities, thriving States and flourishing Territories. These are, however, matters equally interesting to the representative of every branch of trade or pursuit,—to every laborer, indeed, in life's great workshop. But few statistical facts have yet been elicited from the records of the recent national census which are of special moment to the medical profession. Peculiarly interesting to the physician are all the details gathered by matter-of-fact and inquisi-

torial employés of the general government, as to the various forms of mental and physical infirmity. If we could once be thoroughly convinced that all these gentlemen, who make their decennial pilgrimage—usually, and, we think, injudiciously, in the summer months—from door to door, wringing from unwilling and reluctant residents almost as scanty information as is generally accorded to the tax-assessor, conscientiously attended to their duties, making every inquiry that their instructions urged upon them, and systematically registering with proper distinctiveness the different grades and varieties of mental and other unsoundness embraced under the heads of insanity, idiocy, etc., we should have much greater faith in the accuracy of such sum-totals as have been recently published in the columns of the general press as the aggregate of insanity, deaf-mutism, etc. in the United States. No information is more carefully concealed by the giver than that which gives publicity to domestic calamities; and the accuracy of statistics is thus seriously imperilled, for the census-taker doubtless overlooks many a skeleton in the house on account of the cloak that has been so carefully thrown around it. The national statistics-seeker is often also himself to blame. In one case in the personal knowledge of the writer, during a visit of inquiry, one of these individuals, after asking all the usual stereotyped questions as to the population of the house, etc., was reminded that he had forgotten to make any investigation in regard to the possible presence of insanity, blindness, etc. His reply was that he would not think of making any such inquiry, for fear of being considered insulting. Such excessive regard for the feelings of others, though probably not a common failing among census-takers, may, however, in some cases be an obstacle to the proper gathering of valuable statistics. The few results thus far vouchsafed to us are hardly yet sufficiently reliable to afford a text for comment; and until the issue of the smaller Abstract of the Census of 1870, or of the more elaborate and bulky volumes which are periodically published by the authorities at Washington, we scarcely feel justified in forming any comparative judgment on the particular prevalence of infirmities of sense or of the senses in special localities or regions, the influence of race and sex as a predisposing cause, etc.

FABER'S TALKING MACHINE.

BY RALPH M. TOWNSEND, M.D.

A MACHINE that utters the articulated sounds of the human voice has lately been exhibited in this city, the initial exhibitions being given at the Jefferson Medical College and the University of Pennsylvania, respectively. On both of these occasions an interesting accompanying lecture on "The Organs of Voice and the Mechanism of Speech" was delivered by Dr. J. Solis-Cohen.

Joseph Faber (uncle of the present exhibitor of the

apparatus), a former Professor of Mathematics in Vienna, constructed this machine as an exact copy, so far as was possible, of the human vocal apparatus. It was exhibited here thirty years ago, since which time the present Prof. Faber has remodelled and improved it. Its mechanism is intricate, resembling, in its labyrinth of springs, strings, wires, and tubing, a loom, and in the complexity of its workings, the Alden typesetter.

The machine proper is mounted upon a table and operated by a keyboard and levers, like a piano. Under the table is a treadle that works the bellows supplying air to the larynx. The latter is formed of india-rubber, with a movable glottis of thin lamellæ of ivory to give the necessary tension. The upper jaw is wooden and stationary, having a lip of leather. The under jaw, which is movable, is made of gutta-percha, as is the roof of the mouth. The tongue is made of rubber, is flexible and movable, and can be pressed either against the palate or back into the throat. As the mouth is unprovided with teeth, a narrow metallic band is made to fall from over the upper lip and close the fissure of the mouth whenever the dental sounds are required. There is no soft palate. The nasal opening which permits the production of the sounds of *m* and *n* is formed of a tube proceeding from the larynx, beyond the vocal cords, and when the lips are closed, as for *b*. In the same way the *n* is made by the *d*. A little shuttle-wheel is so contrived as to be dropped into the current of air proceeding to the glottis, where its rapid revolution produces the sound *r*.

The lungs are represented by a pair of bellows. The instrument speaks phonetically, and can therefore utter words in any language. Fourteen sounds are used,—viz., the vowels *a, e, i, o, u*, and the consonants *l, r, w, f, s, sh, b, d*, and *g*. In some instances remaining sounds are obtained by variously combining these, and in others they are modified by opening the glottis. The operator, Madame Faber, being a German and not speaking a word of English, the accent of the former tongue is readily distinguishable in the utterances of the machine. A mask, with a tubular nose, is slipped over the mouth when the machine speaks French, so as to give the nasal sound peculiar to the pronunciation of that language. The instrument is also able to speak in a very high or in a deeper tone; but all parts of a complete sentence must be intoned alike.

Such, in brief, are the appearance and construction of this mechanical marvel. Its utterances are distinct, although monotonous and sepulchral,—totally devoid of modulation, emphasis, or shade of expression. Its emotional impressions rank with those of Mrs. Shelley's "Frankenstein,"—a literary monster that has haunted the pillows of two generations of nocturnal readers. It affects a timid individual like a gibbet and skeleton creaking and rattling in the night wind; and one does not marvel at the practical deductions of a Huxley or a Darwin after hearing it drawl out, "I—can—talk—as—well—as—anybody—buth—I'm—a—ma—sheen."

As a fruit, however, of man's patience and ingenuity,—as an apparatus illustrative of the workings of the vocal organs,—and, finally, as showing the infinite superiority of God's handiwork over man's most elaborate imitations,—in all of these this machine stands forth in pleasantly instructive lights, and therefore has its lessons that cannot be too well studied.

In his lecture, Dr. Cohen gave a short sketch of the history of these talking machines, an abstract of which will not prove uninteresting;

"Although attempts at the artificial production of speech had long been made, the first partial success seems to have dated from 1779, in which year the Imperial Academy of Sciences at St. Petersburg proposed, as the subject of one of their annual prizes, an inquiry into the nature of the (Continental) vowel-sounds,—*a, e, i, o*, and *u*,—with the construction of an instrument imitating them artificially. This prize was awarded to one Kratzenstein, who showed that the vowel-sounds could be distinctly produced by blowing through a reed in the lower ends of pipes of certain formation,—one for each vowel.

"About the same time, Wolfgang von Kempelen, of Automaton Chess-Player notoriety, attempted the construction of a talking machine, in which he was moderately successful. The vowel-sounds were produced by adapting a reed to the lower portion of a funnel-shaped tube, the sounds of which were modified by inserting the fist into the mouth of the funnel. He afterwards constructed an oval-shaped box which opened on hinges so as to represent the action of a jaw. The tube containing the reed entered this box, and by opening and closing the jaws he produced the sounds *a, o, u* in a satisfactory manner; *e* was imperfect, and he was unable to produce the sound *i*. (These are the Continental vowel-sounds.)

"Subsequently, he was enabled to obtain from different jaws the sounds of the consonants *p, m, l*, and, by means of combining these, he was enabled to deceive the ear by an imitation of most of the other consonant-sounds; and, finally, he completed an arrangement with only one mouth and one glottis, the mouth consisting of a funnel-shaped piece of india-rubber, the sides of which were compressed by the fingers, so as to represent the lips in the formation of *b, p, m*, and *v*. In the tube leading from the wind-chest into this mouth were two tin tubes, capable of being opened by compressing a button at their free extremity, and thus representing the nostrils. When both of these were open, and the mouth closed, he produced the sound *m*, and when only one of them was open, he produced an *n*. Three valves were upon the wind-chest, two of which when open produced the sounds *s* and *sh*, respectively, made by little pipes; and the third valve when opened permitted the vibration of a separate reed which made a sound somewhat resembling the roll of the *r*. The whole apparatus was enclosed in a box about three feet in length and rectangular in form. It was placed upon a table, and covered with a cloth, under which the inventor placed his hands while operating the machine. He was able to produce a great number of words and sentences,—among others, *papa, mamma, lama, aura, opera, astronomy, Constantinople, exploitation, vous êtes mon ami, je vous aime de tout mon cœur, venez avec moi à Paris, Leopoldus secundus, Romanorum imperator semper Augustus*, etc.

"Mr. Willis, of Cambridge, repeated the experiments of Kempelen, using a shallower funnel, and, instead of introducing his hand to modify the sounds, succeeded in producing the whole series of vowel-sounds by sliding a flat board more or less over the top of the funnel. He then adapted tubes to the reed, and varied the length of the tube by telescopic sliders. When the tube was shorter than that of a stopped pipe in unison with the reed, he produced an *i*, and by increasing the length of the tube the sound changed in succession to *e*, *a*, *o*, and *u*. When the tube was lengthened so far as to be half as long again as the length of a stopped pipe, in unison with the reed, the vowels again were sounded, but in a reversed order, and then again in direct order when the length of the tube was equal to twice that of a stopped pipe in unison with the reed."

After this came the original invention of Prof. Faber, which, with its later modifications, I have above described.

LECTURES ON MEDICAL ETHICS AND ETIQUETTE.

WE believe that a great benefit would be conferred on the medical profession at large if those who are about to enter upon its practice were taught something of the general principles which should guide them in their intercourse with their brother-practitioners as well as with their patients and the public. It is true that the groundwork of medical ethics is the golden rule, to do unto others as we would be done by; and it is equally true that medical etiquette is the working out, in minor matters, of this great principle; and yet there is a wide-spread impression among the laity that the whole affair is an absurd and arbitrary system of punctilio, to which the profession are at any time ready to sacrifice the comfort, and even the lives, of their patients.

A better understanding of these things on the part of those who are entering upon practice would, in our judgment, not only prevent many errors now committed through ignorance, but would tend to strengthen and harmonize the whole profession. For some, indeed, who have a natural aptness in the perception of such matters, and for others who have learnt them by experience in other relations, such teaching might be unnecessary; but there is a large class who would be greatly benefited, and whose whole professional life would be rendered purer and higher in tone, by the distinct enunciation of the principles on which they may, under any circumstances, define what is due to and from them.

Among the points which might be embraced in these lessons, we would indicate the relation of consulting and attending physicians or surgeons, cases of emergency and interference, the general system of charges, the definition of quackery, and legal relations of medical men. There are doubtless others, but these have suggested themselves on the moment, and have all been illustrated, within our own observation, as apt to be subjects of misapprehension on the part of those not yet enlightened by experience.

EXTRACTS.

AUTOPSY OF THE DOUBLE-HEADED BABY.

SO much attention has been excited by the public exhibitions of this monster, and so much of our space has recently been devoted to the discussion of questions of teratology suggested by it, that the following account, from the *Boston Medical and Surgical Journal* of October 5, of the autopsy in the case of the so-called "Ohio twins" cannot fail to be interesting to our readers:

Autopsy, thirty-eight hours after death.—Dr. Ainsworth made accurate measurements of every part, but, being obliged to leave, the examination was conducted by Dr. C. Ellis, with the assistance of Drs. C. B. Porter, H. H. A. Beach, and R. H. Fitz. There was *talipes varus* of the right foot. The length of the bodies, from vertex to vertex, was twenty-nine inches. The fused leg measured, from trochanter to malleolus, eight and one-half inches; around the thigh, eight and one-half inches. The leg corresponding with the smaller child was smaller than that of the other.

No proper *umbilicus* was seen, but in the position of this was a kind of superficial cicatrix an inch or more in diameter. This appearance was connected with an attack of erysipelatous inflammation of the part soon after birth, followed by sloughing. Both *aortas* were found in the usual position, and the preservative fluid passed very readily from the aorta of the larger child into all the vessels of the smaller.

The *round ligament* was in its usual position in each liver, but the vessels soon subdivided, and could not be traced as far as the umbilical region, or, if so, the branches were exceedingly small, and spread out in a fan-shaped expansion of peritoneum. The *lungs* were more subdivided than usual, and on the free edges were several auricular appendages. The *thoracic organs* were in other respects normal. The *livers* presented a number of supplementary lobules and fissures, but were of the usual size. The *spleens* occupied their normal positions in each child, and were in every respect normal.

In the small child, instead of the layers of peritoneum, which extend downwards to form the anterior layers of the *great omentum*, there was a fold attached to the large curvature of the stomach, but half an inch broad. In the large child this fold extended to the colon, as is usual, and formed below a free, thin layer, which represented the great omentum. The *stomachs* were in their usual positions, but both were so affected by cadaveric softening that they were torn in their removal, though handled with ordinary care.

The *small intestines* were fused at a point twenty-five inches above the ileo-coecal valve, that of the smaller child being considerably constricted for a short distance from the junction. The commencement of the fused portion formed a conical sac, with the base and sides an inch and a half in length. The *two mesenteries* of the individual small intestines continued separately over the common portion. The intestine of the larger child measured, from the pylorus to the common portion, thirteen feet three inches; that of the smaller child, seven feet ten inches. There was *one large intestine* twenty-five inches long, apparently the result of the fusion of two, as there were two appendices cœci and four longitudinal bands, each pair terminating in the appendices. Each vermiform appendix had a distinct peritoneal fold.

The *kidneys*, larger than those usually seen in a nine-months child, lay upon the side of the common spine, corresponding with the perfect lower extremities. This arrangement gave a left kidney to the larger child and a right to the smaller, which was also shown by the examination of the organs themselves.

Upon the same side was a well-formed *bladder*, four inches in length and two in breadth; from the fundus of this a *urachus* extended upwards towards the umbilicus. The *hypogastric arteries* were in their usual position. Behind this was a *uterus*, an inch long and half an inch broad at the fundus, with perfectly normal appendages. Fallopian tubes two inches long. Left ovary, one inch; right, three-fourths of an inch in length.

Lying beneath the intestine, and attached to the posterior wall of the abdomen, was a somewhat *conical cyst*, with quite an irregular outline, owing to the sacculation of various parts. The broadest portion, towards the fused limbs, filled the space between the cartilages of the ribs, while the opposite side was only two-thirds as large. It weighed, with its contents, 3 lb. 6 oz. avoirdupois, and contained about two pints of opaque liquid, in which were floating soft, white masses or flocculi, composed of epithelium. On raising the free portion towards the fused limbs, there were seen two well-developed ovaries, three-fourths of an inch in length, attached to the wall of the sac by ovarian ligaments; also two Fallopian tubes.

A careful dissection of the cyst from the tissues which bound it to the posterior wall, showed a *second cyst* lying in and projecting from a small cavity formed by bones, which resembled the *ossa innominata* of the fused limb. This was connected with the large sac by a firm, white cord, from two-thirds of an inch to an inch in length and half a line in diameter. This gradually tapered towards the upper extremity. In the lower portion there still remained a narrow canal, as was shown by the escape of a drop of clear fluid after incision. The small sac was carefully dissected from the pelvis, with what appeared to be a mass of fat; but after removing the latter a *third cyst* was found, the contents of which could be forced into the second through a very narrow canal. The uppermost of these cysts was perhaps half an inch in length, the lower somewhat larger.

Attached to, or rather imbedded in, the posterior wall of the largest cyst first described, near the crest of the *ossa innominata* of the fused limb, were two somewhat *oval, reddish bodies*, the largest seven-eighths of an inch in length, the smallest five-eighths.

This series of sacs and the small, firm, reddish nodules resembled nothing in the fully-developed body, but probably represented certain organs the development of which was arrested or in some way perverted. If we revert to the well-developed organs about which there can be no doubt, we find two complete sets of thoracic organs, two livers, two spleens, two stomachs, two small intestines fused below, and one large intestine presenting some features belonging to two; also one complete set of pelvic organs, and on the opposite side two ovaries and two Fallopian tubes. To complete the double series we need two kidneys, a bladder, and a uterus. A thorough examination of these doubtful formations, by Dr. R. H. Fitz, gave the following results:

"On microscopic examination, the two reddish bodies were found to contain straight and convoluted tubules, with Malpighian bodies. No duct could be found connecting these bodies with the cavity of the cyst. The inner surface of the *large sac* was mostly smooth and serous in appearance, with many reticulated fibres visible beneath the surface. Some portions of this were covered with an opaque, white, wrinkled, almost nacreous-looking coat. This was easily detached, friable, and left a smooth surface when raised. This consisted of epithelium, varying in character between the tessellated and moderately cylindrical forms. Projecting from the inner surface was a conical body, about one-fourth of an inch in length and perhaps a line in diameter, terminating in a red, rounded extremity as large as a mustard-seed. The base of this corresponded with the termination of the white cord previously described, which connected this large cyst with the other smaller ones. The surface around it had a peculiar reticulated appearance over an area two inches square. This was due to the presence of a number of pouches, with free circular openings from two to four lines in diameter. On passing a probe into these, the parietes were found to extend laterally in the walls of the sac for a considerable distance,—in several instances at least half an inch. In the immediate neighborhood of the open pouches were found three or four round yellow patches, rather smaller than the head of a pin. Pressure being applied, a yellow semi-solid substance was set free, which was made up of numerous nuclei of the size of white blood-corpuscles, and large cells often of the size of mucous corpuscles. The largest of these, though still containing an apparently normal nucleus, were quite homogeneous and translucent. The nuclei were faintly granular. These were contained in pouches, smaller, but otherwise similar to

those previously mentioned. The wall of the large sac contained spindle-shaped muscular elements.

This large sac was probably the bladder, judging from the character of the epithelium and the presence of muscular elements. The pouches corresponding in position with the racemose glands at the neck of the bladder were apparently due to retained secretion."

The correctness of the conclusion arrived at by Dr. Fitz is shown by the following chemical examination of the contents of the cyst, by Dr. E. S. Wood. He says:

"The clear fluid was of a light straw color,—spec. grav. 1.014. Reaction acid to test-paper. *Sediment* very abundant, dense, white in color, and consisting of epithelium. *Albumen* was present in considerable amount, the coagulum formed by heat occupying about one-eighth of the bulk of the liquid tested. *Chlorides* and *phosphates* were present in about the same proportions as in normal urine. *Sulphates* were present in less proportion than in normal urine. Concentrated sulphuric and hydrochloric acids produced the same colors as when reacting upon the same amount of urine in which *urophicin* and *uroxanthin* are slightly diminished. Well-defined crystals of *uric acid* were obtained after concentrating the fluid and applying the appropriate tests. These crystals responded to the murexide test. From another portion of the concentrated fluid were obtained crystals of *nitrate of urea*, after the addition of nitric acid. Thus all the constituents of normal urine were present, as well as epithelium in abnormal amount, and albumen."

In regard to the two other cysts, Dr. Fitz makes the following statements:

"The smaller one contained a clear watery fluid. Its inner surface was covered with a delicate tessellated epithelium; the other contained a white, opaque, semi-solid material, made up of fat epithelium. The wall of this was formed of true skin, which bore numerous delicate hairs half an inch or more in length. By the exercise of considerable pressure the sebaceous material could be forced into the smaller cyst through a narrow canal lying between the two." He concludes, therefore, "that the *smaller* sac is probably the uterus converted into a serous cyst by the retention of its secretion; the sebaceous cyst is probably the vagina, which, genetically, is nothing more than inverted skin."

The result of Dr. Wood's chemical examination is as follows:

"The small sac contained about $\frac{3}{8}$ ss of a clear and colorless fluid, which was slightly acid. Spontaneous evaporation of a portion left as the only residue a number of crystals of chloride of sodium. No other substance could be detected by reagents."

Taking into consideration all the above data, we are justified in saying that there existed representatives of the missing organs, either undeveloped or in some way modified.

The spines were curved as they approached each other, and fused at the first sacral vertebra, which was broad and curved. The limb formed by the fusion of two was attached to the body by muscles only.

Large nerves extended from both spinal columns into the rudimentary pelvis and to other parts.

No more complete examination of the skeleton could be made, as the body was removed.

DANGERS OF CHROMIC ACID.—M. Gubler (*Edinburgh Med. Jour.*, September; from *Gaz. Méd. de Paris* and *Bulletin de Thérapeutique Médicale et Chirurgicale*, August 15, 1871) remarks that chromic acid is one of the most powerful of caustics. Only the monohydrated sulphuric acid at all approaches it in strength. It acts rapidly, setting free a considerable amount of heat, so that the temperature may rise to 125 or 150 degrees. If we plunge a small animal, such as a mouse, into a concentrated solution of chromic acid, it is instantly reduced to a cinder, and the ebullition is so great that, unless care be taken, the mouse and a part of the solution are forcibly ejected. This caustic, applied over an extensive surface, may therefore give rise to a deep slough. Further, the absorption of chromic acid is not free from danger, and patients have been poisoned by too extensive an application of this caustic to the surface of their bodies.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY, OCTOBER 12, 1871.

THE PRESIDENT, DR. JOHN ASHHURST, JR., in the chair.

DR. S. S. STRYKER presented for Dr. J. B. H. Gittings a specimen of *aneurism of the abdominal aorta*, removed post-mortem from a confectioner, aged 32 years and weighing 160 lbs. He was of intemperate habits, habitually exposed to cold and moisture, and had had venereal disease.

When 18 years old, he was thrown from a colt and kicked in the lumbar region, from which, however, he did not apparently suffer. A year later he was struck upon the left hip with a large paving-stone. Eighteen months ago he noticed the sudden occurrence of pain in the back and left leg, which subsequently located itself in the left thigh, and disabled him for five months.

A year ago, while standing against a counter, he felt pulsation in the left side, and then by his hand detected a lump, which he subsequently discovered became at least four inches in diameter towards night, but was reduced by the morning to the size of a goose-egg. Two months ago the tumor began to grow rapidly, until it attained a transverse diameter of seven-teen inches, a vertical diameter of fourteen inches, and a circumference of forty inches. The veins over its surface were enlarged, and it imparted a distinct pulsation to the hand. The pulse-rate at the wrist was 120; there was no perceptible pulse in the lower extremities.

He died, and at the autopsy the following notes were made:

The *viscera* were all pushed into the right side.

Thoracic cavity.—The connective tissue of the anterior mediastinum was infiltrated, and the parts were matted together; the anterior margin of the left lung reaching the median line, while the right lung extended to a position one and a half inches from the median line.

Heart.—The apex of the heart extended one and a half inches to the right of the median line, and lay behind the seventh intercostal cartilage of the right side.

Liver and appendages.—The left lobe of the liver extended but two inches to the left of the median line, while the lower edge of the right lobe extended down to the crest of the ilium. The fundus of the gall-bladder lay on a level with the umbilicus and three inches to the right of the median line. The longitudinal fissure was found two inches to the right of the median line, and the suspensory ligament was exposed anteriorly to a distance of four and a half inches. The upper margin of the right lobe extended upward to the upper edge of the fifth rib.

Spleen.—The spleen lay two inches to the right or left of the median line: it measured six inches in diameter.

Kidneys.—The right kidney extended two inches below the umbilicus. The left kidney lay on the anterior and upper aspect of the tumor; was five inches long, and, in position, extended one and a half inches above the umbilicus, its superior border being on a line with the lower margin of the sixth rib. The entire organ lay to the left of the median line. The right supra-renal capsule was in its normal position. The left kidney was in contact with the anterior wall of the abdomen.

Ribs.—The eleventh and twelfth ribs were entirely denuded of periosteum.

Diaphragm.—The tissues of the diaphragm were destroyed.

Pericardium.—The pericardium was moderately distended with straw-colored serum.

Tumor—its position.—The tumor extended two inches to the right of the median line, and occupied the entire left side of the abdomen, passed upwards as far as the sixth rib (upper margin and junction of cartilages) and downward four inches below the anterior superior spinous process of the ilium, crossing anteriorly on a level with the eleventh rib. All that portion of the transverse colon in contact with the tumor was very much contracted; the remaining portion of the transverse colon,

including the hepatic flexure, was moderately inflated. The same statement applies to the cecum and the ascending colon and the transverse portion of the duodenum. The pancreas was pushed forward by the tumor and inclined to the right side; the remaining portion of the small intestine was wedged in between the ascending colon and the tumor, and occupied the cavity of the pelvis, with the sigmoid flexure and the rectum. The descending colon lay directly along the longitudinal axis of the tumor.

The left side of the diaphragm was in great part destroyed by the aneurismal mass, permitting an escape of blood into the left thoracic cavity, as was evidenced by the presence of a large soft clot between the basal surface of the lower lobe of the lung and the diaphragm. There was no evidence of general pleuritis, though thickening of the pleura and old adhesions were seen about the upper lobe of the corresponding lung,—the apparent result of numerous tubercular deposits in the parenchyma of the lung. The old laminated clot was everywhere surrounded, except at its superior portion, by fresh clot averaging about one inch in thickness. At the superior portion was noted a semiglobular mass continuous with the clot already described as occurring in the thoracic cavity. Posteriorly, the mass had protruded through the posterior boundary of the lumbar region to appear on the region of the back, where it formed the tumor so conspicuous in life. The aneurismal cavity was here in direct contact with the skin, extending downwards outside of the abdomen and pelvis along the entire length of the osseous ileo-sacral articulation. The last rib was detached from its articulation with the vertebra, and is denuded of periosteum. The eleventh rib was in position; its costal cartilage detached. The bodies of the lumbar vertebrae, especially the first and second, were eroded by the tumor; the vertebral cartilages, as usual, in great part escaped. The right ventricle of the heart contained a small fresh black clot, which extended up into the pulmonary artery. The psoas muscle in its entire abdominal portion was incorporated with the anterior wall of the aneurismal sac.

Dr. JOHN H. PACKARD related the following case:

Mrs. S., æt. 65, the mother of nineteen children, was a remarkably stout and robust Englishwoman. About three years ago she was greatly overtaxed by the long and fatal illness of her husband, and suffered in consequence a severe attack of typhoid fever, which was followed by phlebitis. From the effects of this she never fully recovered.

In the autumn of 1870 she was found, after having complained for several months of dyspeptic uneasiness, to have a tumor in the epigastrium. This rapidly increased in size, while she became more and more emaciated. It was the seat of excruciating pains and tenderness and of a very marked expansive pulsation. For months before her death she ate nothing, but lived on milk, and took very large doses of morphia. Her bowels were for a time very much constipated, but suddenly became regular, and continued so for six weeks or more before she died (August 29, 1871), the tumor having disappeared a day or two previously, with much pain, after straining at stool.

Autopsy, thirty-six hours after death.—The body was excessively thin. In the *thorax*, the only lesions found were a minute deposit of tubercle, in a cretified state, at the apex of each lung, a somewhat fatty condition of the heart, and a slight atheromatous change in the aorta.

On opening the *abdomen*, the liver was seen enlarged and studded with whitish deposits about as big as English walnuts. The gland-substance was almost entirely replaced by the adventitious material. The pancreas was atrophied and very firm in texture; it was closely adherent to the pyloric extremity of the stomach, which exhibited an epithelioma-like thickening on its inner surface. All the other viscera seemed normal.

Dr. Tyson was kind enough to examine the adventitious deposits in this case microscopically, and reports as follows:

"I was quite surprised to find the nodules in the liver composed largely of fibrous tissue, among which were disseminated many of the small irregularly round and oval granular cells formerly called tubercle-corpuscles. The same elements were present in the little white points in the lungs. The hardened portion of the stomach also appeared fibrous in structure. The nodules were probably deposits of tubercle.

Dr. W. W. KEEN presented for Dr. W. H. WEBB a speci-

men of primary cancer of the head of the pancreas, a detailed account of which appears among the Original Communications of the next number of this journal.

REVIEWS AND BOOK NOTICES.

A MANUAL OF MIDWIFERY, including the Signs and Symptoms of Pregnancy, Obstetric Operations, Diseases of the Puerperal State, etc. By ALFRED MEADOWS, M.D., London. First American from the Second London Edition, Revised and Enlarged. Philadelphia, Lindsay & Blakiston, 1871.

A book which, without exceeding the limits of a manual, shall yet give a comprehensive survey of the more modern views and teachings of the principal schools of obstetrics, has long been felt to be an absolute and pressing want, not only in England, but also on the Continent. The works of Siebold, Wigand, and Kilian have long since ceased to be in the hands of the students, and rest on the dusty shelves of libraries, untouched save by the teacher and special student in this branch of medical science; while the exhaustive and profuse treatises on obstetrics by Hohl, Scanzoni, and Lange are so imposing in bulk and copious in detail that the German student, in despair, turns to the manuals for the use of midwives, published by Martin and Späth, and, with the aid of their insufficient and necessarily-imperfect instruction, seeks to supplement the didactic lectures and thus to prepare himself for the inevitable "*rigorosum*."

In America the same want has been felt even more acutely, owing to the comparatively short time devoted to study, and the increasing tendency to enlarge the sphere of instruction, by the establishment of chairs in the universities devoted to the elucidation of special branches in medicine.

To meet this want, Dr. Alfred Meadows published, a short time ago, a Manual of Midwifery. For many years an active member and office-holder in the Obstetrical Society of London, one of the Physicians to the General Lying-in Hospital, a thorough and indefatigable student in the foreign literature of this special branch, and, above all, endowed, as his original and valuable contributions abundantly prove, not only with a receptive but also with a productive mind, he was eminently qualified for this self-imposed task; and this volume, which is the result of his labors, may with all justice be regarded as representing the principles which govern the practice of the most eminent obstetrical practitioners in Great Britain. The American reprint of the second edition of the Manual will unquestionably be adopted in many of our larger universities as one of the recognized text-books; for the advantages which the student will gain by thus early in his studies familiarizing himself with the names and views of the leading English obstetricians cannot easily be overestimated. The labors of Simpson, Barnes, Braxton Hicks, and others have been so productive that there is scarcely an operative procedure which has not been modified and improved; and to ignore these names and rest content with the works of Ramsbotham and Cazeaux, complete and exhaustive as they once were, is to close one's eyes to modern progress, and to remain forever satisfied with things as they were.

Instead of evading the difficult subject of embryology by referring the student to the text-books on physiology, Dr. Meadows has given a connected and succinct account of the successive steps by which Nature evolves from the simple fructified organic cell the adult and mature fetus. Admirable as is the description, we still feel that had the author been familiar with the investigations of Prof. Waldeyer concerning the minute anatomy of the ovaries (which will soon be made accessible to English readers by the New Sydenham Society's translation of Stricker's Handbook of Histology), he would not have had recourse to the oft-quoted article by Dr. Farré on the "Uterus and its Appendages;" for the researches of the German anatomist constitute, in truth, an era in the study of the histology of the ovaries, and open the way to future investigations with regard to the pathology of this organ, which will, it is only reasonable to hope, throw light upon this hitherto most obscure subject.

The description of the mechanism of labor is clear, and sufficiently extended to avoid any possibility of confusion. We must, however, again enter a protest against a tendency on the part of certain English authors to surrender one of the most important advances which have been made towards simplicity in obstetric nomenclature. To the patient and earnest studies of the elder Naegele by the bedside of the parturient woman we owe the first full recognition of the overwhelming frequency with which the head of the child presents with its long diameter in the right oblique of the pelvis (adopting the German phraseology). Hence he considered this as the normal position, and the others as only rare and exceptional deviations. All of the German authors followed this plan, the most of them, however, adding two more positions when the head occupied the left oblique.

This classification Dr. Meadows has adopted; hence his third position corresponds to our fourth, his fourth to our fifth, leading thereby to confusion when the book is placed in the hands of American students. But Dr. Meadows has not been content with these four positions,—the only ones occurring in practice, except as anomalies or intermediate stages,—but has returned to the old nomenclature of Ramsbotham, and described also the four "direct cranial positions," as he terms them. Each year the necessity for an International Congress of Obstetricians and the adoption of a common nomenclature becomes more and more apparent as the exchange of literary products between the Old and New World becomes more extended. The confusion caused by the diametrically opposite interpretation of the term "oblique of the pelvis" by the two nations in which progress in midwifery has been most active, is alone a serious cause of mutual misunderstanding.

The transference of breech and face presentations to the catalogue of "Unnatural Labors" is also to be regretted. The unavoidable tendency of this classification is to suggest to the mind of the student the necessity of operative interference of some sort or other, even although the author states that, as a rule, in "these cases, the less done the better." For the sake of simplicity alone, the classification of these presentations with those of the head is to be recommended, for by this means the indications for operating become the same in all these cases,—viz., the occurrence of symptoms which make it advisable to assist or to complete the labor. The operation is performed not because there is a face or breech or head presentation, but because certain individual or accidental complications present themselves which determine the obstetrician to aid Nature in the task of expelling the child.

Under the full influence of the London school, the author does not fail to recognize the supreme value of the operation of version,—the triumph of conservative obstetrics; and hence especial care has been given to the description of this operation, its successive steps minutely described and illustrated, the modified methods explained, and the indications clearly drawn.

In the chapter on Puerperal Fever, Dr. Meadows, after a thorough description of the pathological changes comprehended under this general term, does not hesitate to rank himself among those who "dissent from the so-called antiphlogistic principle of treating this disease," and relies on stimulants, light and nutritious diet, and counter-irritation, combined with the use of the diffusible stimulants, opiates, diaphoretics, and vegetable tonics, as soon as the acute symptoms have passed off.

In conclusion, we cannot but feel that every teacher of obstetrics has good cause to congratulate himself on being able to put in the hands of the student a book which contains so much valuable and reliable information in so condensed a form.

THE PHYSICIAN'S VISITING LIST FOR 1872. Twenty-First Year of its Publication. Philadelphia, Lindsay & Blakiston.

The merits of the "Visiting List" are so well known throughout the United States, and it has become positively necessary to so large a number of physicians, that we think it a sufficient notice of the book to call the attention of the profession to the fact that the publishers have already issued the edition for 1872.

BOOKS AND PAMPHLETS RECEIVED.

Clinical Examination of Urine, with a Description of a Convenient Apparatus for its Speedy Analysis. By Reuben A. Vance, M.D.

A Contribution to the Treatment of the Versions and Flexions of the Unimpregnated Uterus. By Ephraim Cutter, A.M., M.D. Reprinted from the *Journal of the Gynecological Society*.

Annual Announcement of the Trustees and Faculty of the Medical College of the State of South Carolina. Session of 1871-72.

On the Use of the Ophthalmoscope in Diseases of the Nervous System and of the Kidneys; also in certain other General Disorders. By Thomas Clifford Allbutt, M.A., M.D., Cantab., etc. 8vo, pp. 405. London and New York, Macmillan & Co., 1871. For sale by Lindsay & Blakiston, Philadelphia.

GLEANINGS FROM OUR EXCHANGES.

THE TESTS FOR THE BILE-ACIDS.—Dr. E. A. Golowin has found (*Virchow's Archiv*, September 18) that neither Pettenkofer's nor Neukomm's test will detect the presence of the bile-acids in a cubic centimetre of water if it does not contain a larger proportion than 0.0001 grain of them.

THE SECRETION OF MILK DURING THE COLLAPSE OF CHOLERA.—Mr. Sedgwick, in a communication to the *Lancet*, October 7, 1871, entitled "On some Physiological Errors connected with Cholera," says that the continuance of the secretion of milk during the collapse of this disease cannot be attributed to the fact that the chief constituents of the milk are not oxidized products, and proposes to account for it by the antagonism which naturally prevails between nutrition and reproduction, and which would allow of the continuance of the functions associated with reproduction, even when, as in the collapse of cholera, there is a central arrest of nutrition.

FIBROUS TUMOR OF THE PALATE.—M. Félizet reports (*L'Union Médicale*, October 3) the case of a woman, aged 47 years, who suffered from a fibrous tumor of the palate, about the size of a bean, and situated to the left of the median line. There was no engorgement of the submaxillary or other glands; the tumor was not painful; the mucous membrane which covered it was not ulcerated, and had never bled; and there was no enlargement of the veins of the region. The tumor was removed by M. Horteloup without difficulty, and nine days after the operation the patient was regarded as well.

EARACHE IN CHILDREN.—Dr. Anstie, after detailing (*The Practitioner*, October, 1871) the particulars of an attack of auricular herpes zoster in his own person, says that the idea has occurred to him that a large proportion of cases of earache, which are generally set down as examples of suppurative inflammation of the meatus auditorius, are in reality nothing but neuralgic herpes, depending on an affection of the auriculo-temporal nerve. In the earache to which children are liable, the pain often comes on in the first instance violently,—the patient cries out with the severity of the suffering;—but then there are remissions, amounting often to complete intermission. Moreover, it is but rarely that a well-defined discharge of pus is observed, even when relief to the pain has been somewhat suddenly obtained, as is not unfrequently the case. On the contrary, there is frequently found a shedding of small scales, either dry or moistened with a little bloody sanies, from the lining of the meatus, a few days after the cessation of the pain,—in fact, what looks like the dead epidermis of vesicles that have faded. The whole course of events seems, he says, to correspond much more nearly with that of auricular neuralgic herpes than with that of common abscess of the lining membrane of the meatus.

Herpes zoster occurring in children on other parts of the body is not attended by much neuralgic pain, and the occurrence of severe pain in the auricular form of the disease is difficult to explain. Dr. Anstie suggests that it may be due

to the fact that the superior and inferior maxillary nerves are the first of all sensory nerves in the body to exhibit any tendency to pain of a grade approaching to the severity of true neuralgia; and the reason of this is, possibly, the depressing and exhausting influence exerted upon them by the growth of the teeth.

BROMIDE OF SODIUM.—Dr. Meredith Clymer, in *The Medical World* for October, 1871, says there is reason to believe that in this drug a happy substitute for bromide of potassium will be found, better tolerated by the system, and free from the objections urged against the latter. He has habitually used the bromide of sodium for some time past in all disorders of the nervous system where he before ordered the potassic bromide. The dose administered is about the same as that of bromide of potassium. In epilepsy, Dr. M. usually gives twenty grains three times daily. The drug sometimes seems to occasion constipation, and the eruption produced by the potassic bromide also occasionally attends its use; but all the other inconveniences of the latter drug are avoided.

Apropos of the above, we note in the *British Medical Journal* for September 23, 1871, among others some unusual effects of the administration of bromide of potassium. A young lady commenced with fifteen-grain doses, and continued until she was taking forty-five grains three times daily. She suffered, as the result of these large doses, from intense depression of spirits, great bodily weakness, and an eruption of ecthyma. A most offensive fetid odor arose from her breath, so bad that no one could stay in the room with her. Her memory was greatly impaired, and on one or two occasions her mind seemed a perfect blank. All these symptoms subsided on discontinuing the bromide, but at the same time the frequency of her epileptic seizures increased.

INJECTIONS OF LIQUIDS UNDER THE PIA MATER OF THE SPINAL CORD.—Axel Key and G. Retzius (*Centralblatt*, August 19, 1871; from the *Nordisk Medicinisk Arkiv*) have found, in experimenting upon living animals and upon the dead body, that when fluids of different kinds were injected under the pia mater of the spinal cord, the cranium being unopened, they were distributed over the surface of the brain, showing that there is a communication between the subarachnoid space of the spinal cord and that of the brain. Another result of the injection was distention of the perivascular canals of His and Arnold. The injection also reached the choroid plexuses, and penetrated to the lateral ventricles, from which it passed through the aqueduct of Sylvius to the fourth ventricle, and sometimes even to the central canal of the cord. The perivascular spaces in the cerebral hemispheres, as well as in the optic thalami, corpora striata, corpora quadrigemina, hippocampus major, etc., were also injected, showing a direct connection between the perivascular spaces and the subarachnoid spaces. In some cases the injection passed from the subarachnoid space into the sinuses of the dura mater, and in a few cases through the veins of the skull into those of the scalp. The Pacchionian bodies were believed to play an important part in the latter cases, for when examined they were distended with the injected fluid, and the experimenters regard them to a certain extent as safety-valves for the subarachnoid space, because, while they permit the fluid of the subarachnoid space to pass through them to the sinus, they oppose an effectual barrier to the return-current of blood.

OVARIO-MANIA.—Dr. Strehill Wright reports in the *Edinburgh Medical Journal* for September, 1871, a case in which mental disorder seemed to be dependent upon cancerous disease of the ovaries. The patient, whose mind was hereditarily predisposed to disorder, was exposed to severe trials of a moral nature. Her principal symptoms were depression of spirits, hallucination of vision, and occasional periods of excitement, during which she averred that her person had been violated. She was relieved of these, but returned to the asylum in very nearly the same condition as before. At this time she entertained numerous unfounded suspicions of her neighbors, who, as she imagined, accused her of having given birth to a child, which she had murdered.

PITTING FROM SMALLPOX.—Dr. Rendle, in a letter to *The Practitioner* for October, recommends the application of cotton-wool to the face and neck of patients suffering with smallpox to

prevent pitting. He says, "I have now two cases convalescent from smallpox in which I applied cotton-wool to protect the face. The disease in each case was of the distinct form. One of the two, a girl, aged fifteen years, had an abundant eruption, which, in the unprotected parts of the body, went through the usual consecutive changes. In both cases the parts covered with the wool are left without a vestige of marks. The mode of application is as follows: On the first appearance of the eruption, patches of skin, about an inch square, were washed over with collodion, and immediately covered over with a thin uniform layer of fine wool; the wool readily adheres if applied before the ether of the collodion evaporates. When the whole of the face, etc. was thus covered, the wool was brushed over with a solution of starch or gum. The starch or gum was occasionally reapplied to the edges of the wool, to prevent any shifting by the movements of the face. This covering was kept on until the dry crust fell off the other parts of the body."

OVARITIS.—Dr. J. Matthews Duncan, in the course of an article contributed to the *Edinburgh Medical Journal* for September, says that, although unable to give a good idea of the frequency of ovaritis, he is convinced that it is a more common disease than is generally supposed. He says that three forms have been described,—1, parenchymatous, 2, follicular, 3, peritoneal,—but that he is unable to see any real distinction between the parenchymatous and the follicular disease, and that the peritoneal form is out of the question, since the ovary has no peritoneal coat. He admits, however, that periophoritis, or inflammation of the adjacent peritoneal membrane, may occasionally occur. Ovaritis may be acute or chronic: the former may terminate in resolution, or its end may be complicated by paraovophoric adhesion or abscess, or true ovarian abscess, or it may end in the chronic form of the disease; the latter may last for several years. One ovary may be affected, or both, or the disease may affect the right and the left ovary alternately. The organ may be enlarged to the size of a hen's egg. Ovaritis is only to be made out by physical examination. Palpation of the hypogastric region will reveal a feeling of fulness or tightness over the affected gland. The ovary may often be felt through the vagina, and, when inflamed, it is exquisitely tender, rounded, and more or less enlarged. When the ovary is bound down by adhesion, it may sometimes be difficult to distinguish it from the fundus of a retroflected uterus; but the distinction is generally possible if a uterine sound be used. Ovaritis is more frequently accompanied by too profuse menstruation than by amenorrhœa, is occasionally attended with leucorrhœa, and is not inconsistent with fertility. It is extremely frequent in the newly-married, and in others it may be produced by excessive sexual intercourse. Dr. Duncan does not recommend any peculiar or special treatment.

FATAL SALIVATION FROM BICHLORIDE OF MERCURY.—In a case which is fully reported in the *Lancet* for September 16, Dr. Meeres applied with a small camel's-hair brush a strong alcoholic solution of corrosive sublimate—eighty grains to the ounce—to the head of a child affected with tinea tonsurans. The application gave rise to no pain at the time, but during the ride home, in an open dog-cart, the child suffered severely. Shortly afterwards vomiting and purging came on. Salivation, accompanied by much swelling of the parotid and submaxillary glands, was first observed on the evening of the day after the application, and continued until death took place, apparently from prostration, on the morning of the fifth day.

The verdict of the coroner's jury was "that death was caused by poison from the application of a very strong preparation of bichloride of mercury made to the head and neck by Dr. Meeres," and that "Dr. Meeres is very greatly to be blamed for having made the application."

The lotion applied was from a formula of Dr. Tilbury Fox, and has been used by him in a precisely similar manner in the same disease in very many instances, and this case is the first in which any untoward symptoms have been produced by it.

LETHARGUS.—Dr. Thomas H. Bailey publishes in the *New York Medical World* for October, 1871, an account of this "singular and invariably fatal malady, peculiar to the negroes of certain districts on the western coast of Africa." As im-

plied by the name, the principal and sole symptom is *lethargy*. The patient, usually an adult male, is seized, without premonitory symptoms, with drowsiness, which continues to increase in spite of all efforts to throw it off, until he sinks into a profound and seemingly natural sleep, which continues for about twenty-one days, when death occurs. Throughout the patient preserves a quiet and peaceful countenance, may be easily roused for a short time, will take nourishment, and generally answers a few questions in a rational manner.

The pulse, respiration, and temperature remain normal throughout, the pupil maintains its normal size, and the urine and feces are regularly voided.

Remedies avail nothing, and post-mortem examinations by competent men reveal no lesion.

CAN CHLOROFORM BE USED TO FACILITATE ROBBERY?—Dr. Stephen Rogers, the President of the New York Medico-Legal Society, in the course of a paper read before the society and published in *The Journal of Psychological Medicine* for October, reaches the conclusion that it would be almost impossible to use chloroform for this purpose. Attempts to chloroformize persons while asleep have generally, if not always, been unsuccessful, not merely on account of the pungent impression of the vapor upon the respiratory membrane, but also because if it be in sufficient concentration to produce anaesthesia within any ordinary period it excites temporary closure of the glottis and arrest of respiration. But, even were this practicable, the very time that would be consumed in the gradual and cautious administration of the vapor—the only possible theoretical manner of accomplishing it—would so increase the danger of detection that few thieves would think of employing it.

The use of chloroform in this way would not be resorted to, because the subject during the process of chloroformization might become turbulent and noisy, and so awake the other inmates of the house. The administration of chloroform by inhalation is also not unattended with danger; and this would prevent those criminals from using it who were unwilling to add the crime of murder to that of robbery. Dr. Rogers regards nineteen in twenty of the cases of alleged felonious use of chloroform as merely fictitious.

A CASE OF PROGRESSIVE MUSCULAR ATROPHY, SIMULATING GLOSSO-LABIO-LARYNGEAL PARALYSIS.—Dr. T. M. B. Cross reports in *The Journal of Psychological Medicine* a case of progressive muscular atrophy beginning in the tongue. The first symptom was want of clearness and distinctness in articulation; this was followed by a tickling sensation in the back part of the buccal cavity, as though the uvula was elongated. A few months later, the patient first began to feel a lack of power in the movements of the tongue, which was especially marked in the act of mastication. He then found he was unable to whistle as proficiently as formerly, and that while he was talking air passed freely through his nose. Next followed a stiffness about the lips and the angles of the lower jaw. About nine weeks after the occurrence of the first symptom he experienced the feeling of worms in the chin; this was followed by fibrillary contraction in the left arm and very great indistinctness of speech. When he came under Dr. Cross's observation, the tongue was very small,—only about two-thirds its normal volume,—and it was constantly agitated by fibrillary contractions. Its movements were very much interfered with, and, while its reflex movements were not impaired, its electric contractility was much affected. The mental faculties of the patient were perfect. The points upon which the diagnosis is based are as follows: The disease commenced in the tongue; there has been a gradual loss of power in this organ in proportion to the amount of atrophy; the affection has extended to other parts, and is now present in both upper extremities; there is an absence of some of the symptoms which ought to be present at this stage in glosso-labio-laryngeal paralysis.

"TORSION OF ARTERIES," says Stromeyer (*British Medical Journal*, September 23, 1871), "has never been so thoroughly tried in the field as by MacCormac, who used it in more than one hundred capital operations with evidently good results, even for the largest arteries." Stromeyer has remained faithful to the ligature.

MISCELLANY.

INTERNATIONAL COPYRIGHT.—This subject appears again to be exciting much attention in England, and Mr. Erichsen, the distinguished surgeon, who thinks that he has been a special sufferer by the freedom with which English books are reprinted in this country, has sent to the *London Times* a copy of a letter which he addressed during the civil war to our minister in London, Mr. Adams. The letter itself is rather long; but its gist is contained in the following paragraph, which we take from the *Medical Times and Gazette* of October 14:

"In the American civil war the American government furnished the medical staff of the army with 58,074 volumes of medical works. The two principal items on the list were Mr. Erichsen's 'Principles of Surgery' (5370 copies) and Bumstead on 'Venereal Diseases.' These copies of Erichsen's 'Surgery' were not one of them supplied by the publishers of that work in this country; they were, in fact, an American pirated edition, and a robbery of Mr. Erichsen to the amount of from £2800 to £3000. Mr. Erichsen wrote a most courteous letter, stating the facts of the case to Mr. Adams, the Minister of the United States in this country, and received a reply, in which the minister said he had great pleasure in transmitting Mr. Erichsen's letter to America. He added, 'The question of international copyright is one which has been already much discussed in America, but I doubt whether the period for successful negotiation about it has as yet arrived.' This is certainly an argument in point. There the matter has been allowed to remain for the five years that have elapsed since the correspondence. No answer has been returned from the American government. Meanwhile Mr. Erichsen has the barren satisfaction of knowing how highly his work on Surgery is esteemed in America."

Although Mr. Erichsen has certainly suffered from the want of an international copyright law, which also affects American surgeons, the large sale of his book in this country is due in some measure at least to the fact that it can be published at a lower price than the works of native authors.

CHANGE IN THE NAVAL BUREAU.—Dr. W. M. Wood has resigned the position of Chief of the Bureau of Medicine and Surgery, U.S.N., and Dr. Jonathan M. Foltz has been appointed in his place.

THE WEATHER DURING OCTOBER.—The mean temperature of the month was 57.87 degrees, while that of October, 1870, was 60.13 degrees, that of October, 1869, 52.5, and that of October, 1868, 54.08. The highest point attained by the mercury during the past month was 78 degrees, on the 11th inst., and the lowest 37 degrees, on the 30th, giving a range of 41 degrees; while the highest point reached in October, last year, was 80 degrees, the lowest 39.5 degrees, giving a range of 40.5 degrees. The average of the mean temperatures of October for the past 82 years is 54.71 degrees. The highest mean on record for the month was 64 degrees, in the year 1793, and the lowest 46 degrees, in 1827. The total rain-fall for the month was 4.86 inches, compared with 3.90 inches in October of 1870, and 6.32 inches during that month of 1869. The average rain-fall for the month of October, for the past 34 years, is 3.28 inches.

THE EPIDEMIC OF SMALLPOX IN PHILADELPHIA.—Such exaggerated rumors have been in circulation in this and other cities in reference to the extent and severity of the present epidemic of smallpox, that we are very glad that the Board of Health have made a report as to the prevalence of the disease. From this we learn that up to the 4th of November there were

during the present year 2168 cases and 378 deaths from smallpox. Most of these cases occurred, it is true, during the month of October; but the numbers are really inconsiderable when we take into consideration the population of the city, and show that the statements in the newspapers in other cities have been gross exaggerations.

THE number of deaths from smallpox in Philadelphia for the weeks ending October 28 and November 4 were respectively 84 and 95.

BEQUEST.—E. W. Houghton, Esq., has given \$10,000 to Dartmouth Medical College to establish a museum of pathological anatomy.

APPOINTMENTS.—The following appointments have recently been made in connection with the Harvard Medical School: James C. White, M.D., has been appointed Professor of Dermatology; George Henry Derby, M.D., Professor of Hygiene; Henry W. Williams, M.D., Professor of Ophthalmology; and John E. Tyler, M.D., Professor of Mental Diseases. J. Nelson Borland, M.D., has been appointed Instructor in Clinical Medicine; Clarence J. Blake, M.D., and John O. Green, M.D., Lecturers on Otology for the current academic year; and Henry K. Olliver, M.D., Lecturer on Laryngoscopy for the same period. Dr. W. L. Richardson has been appointed Instructor in Obstetrics in this same institution.

Mr. Haviland, author of the "Lectures on Medical Geography," has been chosen to succeed Dr. Ballard as Medical Officer of Health for Islington.

Prof. W. W. Dawson has been appointed to succeed the late Dr. Blackman in the Chair of Surgery at the Medical College of Ohio.

Mr. Henry Alleyne Nicholson, late Lecturer on Natural History in the Medical School of Edinburgh, has been appointed Professor of Natural History in the University of Toronto, Canada.

PROF. KARSTEN, OF VIENNA.—Some months ago we described in these columns the unfortunate difficulty between the learned professor of botany and the students of the University of Vienna, which grew out of the very rigorous examinations of the former. We learn from a recent letter from Vienna to the *London Lancet* that after these events Prof. K. was temporarily suspended, both as professor and examiner, in the Vienna faculty; but immediately after the interview at Gastein the Austrian Minister of Public Instruction fully restored Dr. Karsten to his former position, notwithstanding the opposition of the College of Professors and of the Consistorium. The students, therefore, are again preparing to put in a protest in their own way, and are rather amazed at the obstinacy of the professor and his "toughness of skin."

SICK WOMEN UNCARED FOR IN TURKEY.—No special hospital for women exists in the Turkish Empire; not even a general one, where a sick Moslem woman can be nursed. During the cholera epidemic of 1865, so numerous and so heartrending were the scenes of misery and neglect, that the Sublime Porte was forced by public—that is, European—opinion to vacate temporarily a building for the female sufferers from this scourge. The want of such a shelter being felt, the foundations of a small hospital were shortly afterwards laid; but, through lack of funds, nothing further was done. In the March issue of the *Gazette Médicale d'Orient*, the editor complains that two millions of dollars are promptly

forthcoming for a useless iron-clad, but not the few thousand piastres necessary to put this building in working-order.

ILL-ADVISED PATRIOTISM.—Hitherto, at the Imperial Medical School of Constantinople, the lectures and text-books have been in the French language; but the Sultan, with more patriotism than wisdom, has recently issued an order that the Turkish language is in future to be exclusively used. As this Tartar hybrid is not rich in medical literature, and is not sufficiently flexible for technical terms and scientific precision, all the European physicians at Constantinople are prophesying the decadence of medicine in the East. The same patriotic experiment was tried at the once-flourishing Pesth University, but since the introduction of the Hungarian language—also a Tartar dialect—that school has, according to M. Jaccoud, rapidly declined in reputation and usefulness.

BILLS OF MORTALITY.—We have read with interest, in the New York *Medical Record* for September 1, 1871, an admirable paper by Prof. Samuel Henry Dickson, of this city, on "Bills of Mortality." It is suggested by the recent report of the Philadelphia Board of Health, and is too long to extract entire, while it would lose much of its force by being condensed. Some valuable suggestions are made, which should be disseminated and promptly acted upon. One or two of these we reprint. Thus, after quoting from a letter by Dr. J. H. Taylor, Physician-in-Charge of the "Municipal Hospital" near Philadelphia, that out of 246 whites admitted with relapsing fever but 4 died, or 1 in 60½, and that of 244 colored 62 died, or 1 in 3½, he says,—

"It is not easy to explain this prodigious difference in proportional mortality. Negroes do not die *thus* of yellow fever, nor of scarlatina, nor diphtheria.

"The colored hybrid is farther removed from the black than from the white, as Knight has shown that in all hybridism the better element prevails and raises the product more than half-way. It is to be regretted that this distinction is so generally ignored, and that all who are of the lower race are spoken of under one head. A *mulatto* is, in all grades, essentially *not a negro*. He has acquired, by birth and blood, peculiarities which expose him specially, and specially protect him. He is as liable as his white progenitor to malarial fevers and to yellow fever, and dies as readily of scarlatina and diphtheria. I am curious to know where he stands as to the proclivity of his dark ancestor to the access of relapsing fever, and his promptness to sink under its attack."

Again, after quoting this significant statement from a letter of Dr. Goodman, the Port Physician,—“I have seen several deaths from want of knowledge how to get destitute sick into the Almshouse for treatment; some have been so sent from post to pillar, endeavoring to obtain admission, that I have finally sent them to the Hospital for Contagious Diseases, to save them from starvation and death!”—he says, truly,—

"It is rare to find a hospital founded on true philanthropic principles. Such a one was the 'Roper Hospital,' of Charleston, South Carolina, of which the fundamental rule was that a sick patient was to be at once received and taken care of,—without question, without delay. No matter whether young or old, black or white or yellow, rich or poor, free or slave,—and it was in a slave State, before emancipation was anything but a dream,—he was detained no longer than to ascertain the existence of real, not feigned, disease. In every city on the globe there should be at least one such institution, which should serve as a home for the utterly friendless when ill, and at least as a temporary refuge for those who require time to procure the 'orders' and 'certificates' ultimately within their reach, but not immediately accessible in their

hour of need. These may be finally disposed of elsewhere as privileged."

We wish we had space to quote more freely remarks on average mortality, the proportion of infant deaths, careless returns of births, more effectual means of *cooling* habitations in summer, relapsing fever, defective nomenclature of bills of mortality, yellow fever, scarlatina, and pneumonia, but must refer our readers for further details to the number of the New York *Medical Record* above specified.

SUICIDES IN FRANCE.—The suicides that occurred in France in 1869 numbered 5114, against 5547 in 1868. Of the former, 4113, or about four-fifths, were males, and 1001 females. With regard to the age of the persons who destroyed themselves, 37 were under sixteen, and 1432 over sixty. Among the causes attributed, poverty was assigned 474 cases; family troubles, 571; love and jealousy, 222; insanity, 1516; physical suffering, 591; intoxication, 661; and crime, 26.

A PRACTICAL JOKE.—A prominent physician in New York was somewhat annoyed to observe tacked to his office-door, the other morning, a tin sign (evidently transferred by some jester from a barber-shop), which read, "Gentlemen wishing Dying done should apply within."

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending	
	Oct. 28.	Nov. 4.
Consumption	40	36
Other Diseases of Respiratory Organs	23	26
Diseases of Organs of Circulation	13	17
Diseases of Brain and Nervous System	36	32
Diseases of the Digestive Organs	27	22
Diseases of the Genito-Urinary Organs	8	6
Zymotic Diseases	109	111
Cancer	7	4
Casualties	8	9
Debility	20	22
Intemperance	1	3
Murder	1	1
Old Age	7	7
Stillborn	16	18
Scrofula	1	2
Suicide	1	1
Syphilis	1	0
Tetanus	1	1
Tumors	1	0
Unclassifiable	7	6
Unknown	1	1
Totals	329	325
Adults	174	161
Minors	155	164

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM OCTOBER 19, 1871, TO NOVEMBER 4, 1871, INCLUSIVE.

McKEE, J. C., SURGEON.—By S. O. 223, Department of the East, October 18, 1871, granted leave of absence for thirty days on surgeon's certificate of disability.

TILTON, H. R., ASSISTANT-SURGEON.—By S. O. 223, current series, Department of the East, assigned to temporary duty at Fort Wadsworth, N. Y. H., and to rejoin his proper station on return of Surgeon McKee.

MACKIN, CHAS., ASSISTANT-SURGEON.—By S. O. 81, Headquarters Military Division of the Missouri, November 1, 1871, granted leave of absence for sixty days.

HALL, J. D., ASSISTANT-SURGEON.—By S. O. 232, Department of Dakota, October 21, 1871, assigned to duty at Fort Benton, Montana Terr.

FRIDAY, DECEMBER 1, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON TUMORS OF THE LARYNX IN CHILDREN.

BY WILLIAM PEPPER, M.D.,

Lecturer on Clinical Medicine in the University of Pennsylvania; Physician to the Philadelphia Hospital and the Children's Hospital.

(Concluded.)

ACTING, then, upon the belief that there was a laryngeal tumor present, I admitted the child to my ward in the Children's Hospital, with a view to the performance of tracheotomy. The child's strength had, however, begun to run down very rapidly, and her appetite had failed, although the degree of respiratory embarrassment seemed no greater than had existed for several weeks. A consultation of my colleagues was called, and it was unanimously determined to perform the operation after a short delay, during which the use of antispasmodics internally, and of mild sedative astringents locally by inhalation, was directed. The object of this latter treatment was to remove any element of spasm or of congestion of the larynx which might be present, in the hope that enough relief might be gained to enable the child's throat to become accustomed to the presence of a laryngeal mirror, so that, if possible, the removal of the growth might be effected through the mouth. Unfortunately, this delay proved fatal: the same night, without any apparent increase in the difficulty of breathing, the child's strength failed rapidly, the pulse became very feeble and frequent, and death occurred at seven o'clock the following morning. The immediate cause of death was a paroxysm of dyspnoea, upon the occurrence of which I was summoned to instantly perform laryngotomy, but arrived at the Hospital a few moments after life was extinct. The post-mortem examination was made on the following day; and while you examine the larynx, which I hand to you, I will read the notes of the morbid appearances made at the time:

The larynx was removed by separating the attachments of the hyoid bone. The epiglottis was of normal size and color; the aryteno-epiglottidean folds were slightly oedematous. Upon looking into the larynx from above, the glottis seemed entirely obstructed by a papillary growth: the experiment was not

tried, but it seemed as though water would scarcely have trickled through the obstruction. The larynx was cut open along the median line of its posterior surface, so as to fully expose its cavity. The under surface of the epiglottis was healthy. The false cords were fringed by a row of low, warty growths. By far the greater portion of the tumor, however, sprang from the true cords. The left one was the seat of numerous little papillary bodies, most of which were $\frac{1}{3}$ " to $\frac{1}{2}$ " in diameter, and sessile; but one hung by a delicate though short pedicle, and had a head rather more than



$\frac{1}{4}$ " in diameter. The right cord was throughout its entire extent occupied by a growth, consisting of closely-apposed papillary or filiform bodies, together making a

broad-based sessile mass, attached to $\frac{1}{3}$ of the circumference of the larynx, and projecting $\frac{1}{4}$ " into its cavity. This was the chief source of the obstruction. These growths were quite soft and friable, and, on being pushed or pressed, exuded a small amount of juice. The entire right cord was so thoroughly involved that it would have been completely destroyed in the removal of the growth; and the same was to a great extent true of the left cord. Below the vocal cords there were a number of minute elevations of the mucous membrane, which were evidently incipient warts. The growth was examined microscopically by Dr. William B. Corbit as well as myself, and we both found it to be composed of numerous large flat epithelial cells arranged in layers, and with one, or in some instances two, large nuclei. The cell-contents were finely granular. The tissue beneath these epithelial layers presented numerous spindle-shaped nucleated cells, and many of intermediate oval forms. There was a scanty fibrous stroma.

The trachea was perfectly healthy. The bronchi were also healthy. The glands along the right bronchus and at the bifurcation were considerably enlarged, and had undergone cheesy and calcareous degeneration: their capsules were greatly thickened and indurated. Despite their enlargement, they had not encroached at all upon the calibre of the bronchi or trachea.

Lungs.—The right lung was tightly bound by pleuritic adhesions. Its tissue was, however, quite healthy, save a very few small cheesy nodules, enveloped in a capsule of fibroid tissue. The left lung was free from adhesions, and entirely healthy.

The thymus gland was unusually large for a child of $3\frac{1}{2}$ years, weighing 10.22 grammes; its tissue was, however, healthy.

This account of the post-mortem appearances shows clearly how correct was the opinion expressed during life as to the cause of the obstruction to breathing. The growth which was found on the vocal cords presented all the characteristics of one of the most common forms of laryngeal tumors.

A number of varieties of these growths are described as occurring with more or less frequency. Of these, however, several kinds, as mucous polypi, myxomata, lipomata, and cystic tumors, have not as yet been observed in children, in whom the forms of papillary, epithelial, and fibrous growths (which are indeed the most frequent at all ages) include all the cases observed.

I shall give you a brief description of the appearances presented by each of these varieties, since, although the use of the laryngoscope in young children is fraught with many difficulties, we can occasionally get a satisfactory view of the vocal cords and interior of the larynx, and can then easily recognize the position, and even the character, of any growth that may be present.

The *fibrous polyp* is usually a single circumscribed oval or round tumor, pedunculated, or, more rarely, sessile, and due to a localized hyperplasia of the submucous connective tissue. Its surface is generally smooth and its color reddish. It is of very slow growth, and rarely attains a large size. When examined microscopically, it is found to present the ordinary structure of fibrous tumors, consisting of interlacing bundles of white fibres, and is usually invested by layers of epithelium.

Epithelial growths present on microscopic examination a structure entirely made up of tessellated epithelium. They are usually sessile, of small size, and of white or pale-red color.

Papillomata, to which class the growth found in the present case belongs, are by far the most frequent of all laryngeal tumors. They usually appear as a congeries of small condylomatous or warty excrescences, which may by aggregation attain a considerable size. Their color is usually pink, and the surface, which is irregular, may present a cauliflower, foliated, or mam-

millary character. Their structure presents on microscopic examination a basis of connective tissue invested by a series of superimposed layers of squamous epithelium.

The favorite positions for all of these growths are the true and false vocal cords, the bottom of the sinuses of Morgagni, and the base of the epiglottis: so that it is evident they can rarely attain any considerable size without inducing serious interference with respiration. The papillary and epithelial growths are usually sessile, but occasionally a fibrous polyp has so long a pedicle as to be quite movable, and thus hang down below the vocal cords or rise up into the cavity of the larynx, and thus avoid obstructing the glottis. In such a case, it is evident that the tumor might occasionally become engaged in the glottis, and thus give rise to paroxysms of suffocative dyspnoea, while in the intervals the respiration might be quite unobstructed. Such is apparently the explanation of some of the cases on record where there have been violent paroxysms of dyspnoea, with intervals of complete relief from all symptoms of obstruction. The rate of growth of all laryngeal tumors is slow. That of papillomata is more rapid than in the case of the other varieties, and Mackenzie ("Growths in the Larynx," 1871, p. 40) cites two cases, in one of which "two growths, placed symmetrically on the posterior part of the vocal cords, attained the size of split peas in less than three months; and in the other the growth reached the size of a raspberry in less than nine months." In many cases, however, the tumor slowly increases in size for several years before giving rise to urgent symptoms; and even after these growths have become so large as to cause aphonia and some degree of dyspnoea they may remain inactive for years.

Our knowledge of the *causes* which lead to the development of tumors in the larynx is very imperfect. It does not seem possible to establish any causal connection between the existence of either the tuberculous or syphilitic dyscrasia and the production of these growths; and it is probable that the causes all act by inducing chronic congestion or actual inflammation of the mucous membrane, and thus favoring the hyperplastic growth of the different elements of its tissue. Thus, there can be no doubt that one of the most fruitful causes is the inhalation of irritating gases or air loaded with dust; and hence we find that a large proportion of the patients suffering with laryngeal tumors follow occupations which expose them to this cause. It is also because men are so much more frequently engaged in these occupations that a large majority of the patients are of the male sex.

Another well-determined cause is the influence of certain acute specific diseases, and especially measles, smallpox, and scarlet fever, which are so frequently accompanied or followed by laryngitis. I believe, indeed, that it is chiefly by the frequency with which this class of diseases occur during childhood that we are to explain the comparatively frequent occurrence of laryngeal tumors in young children. The author of one of the most interesting memoirs on this subject (Causit, "Etudes sur les Polypes du Larynx," Paris, 1867) maintains that these growths are not rarely congenital; and though his table of cases cannot be said to establish this fact beyond doubt, it at least proves conclusively that they occur frequently in early infancy and childhood.

I have already detailed the symptoms which attend the presence of a tumor in the larynx, and will therefore only refer briefly to them in connection with the anatomical appearances I have been describing. The symptoms usually come on insidiously after the patient has presented evidences of chronic laryngeal congestion, but at other times they may appear more abruptly, —following some acute disease, as measles. Pain is

scarcely ever complained of, and cough is rarely troublesome. In some cases, indeed, cough is entirely absent, while in others, especially when the tumor is seated near the glottis, it is croupy in character, and occurs in paroxysms of greater or less violence. The two characteristic symptoms are, however, modification of the voice and dyspnoea. Alteration of the voice is almost invariably present. It usually begins as mere dysphonia, but increases gradually until, in a majority of cases, there is complete aphonia. The degree of dysphonia does not merely depend upon the size of the tumor, but is influenced both by its position and its mode of attachment. Evidently a small sessile growth springing from the vocal cords will far more seriously impair vocalization than a much larger but pedunculated tumor attached so as to allow it to rise up into the cavity of the larynx or to fall below the vocal cords.

Dyspnoea is second in constancy only to alteration of the voice as a symptom of laryngeal tumor, and is present in a large majority of cases. It generally is first noticed as a slight difficulty of breathing, which gradually increases until there is in some cases extreme habitual dyspnoea. When this happens, inspiration is prolonged and stridulous, and is accompanied by recession of the base of the thorax and by deepening of the supra-sternal notch, while expiration is also long, though usually quiet and less labored. You will remember the explanation I gave of these phenomena, and the value which, as I told you, attaches to them as signs of mechanical obstruction of the air-passages.

The degree of persistent, habitual dyspnoea depends of course upon the degree of actual obstruction of the larynx, and in many cases never reaches the extreme stage I have described. Whether, however, it is less or greater, there are nearly always paroxysmal exacerbations, which arise from trifling causes, such as slight congestion and swelling of the mucous membrane, or spasm of the muscles of the larynx. These attacks begin by being of moderate severity and occurring at long intervals, and usually grow progressively more frequent and violent, until they threaten to induce fatal suffocation. Indeed, when death occurs as the result of laryngeal tumor, it generally takes place during one of these paroxysms. You see, then, that the two symptoms which are most characteristic of the presence of a laryngeal tumor are alteration of voice and dyspnoea, and, when it is impossible to make a laryngoscopic examination, it is necessary to depend in making a diagnosis upon a critical study of the mode of development and precise characters of these phenomena.

It is not my intention to go into any detailed account of the treatment necessary in cases of tumors of the larynx. The only object to be gained by internal medication is to allay spasm when this is troublesome and induces severe paroxysms of dyspnoea. The methods of treatment which are absolutely necessary are surgical in character, and consist either in the destruction of the growth by caustics, or its removal by instruments. Statistics give an unquestionable preference to the latter mode of procedure; and I know of no more brilliant achievements of surgery than the results obtained by laryngoscopists in the removal of these growths. For the details of the operations and minute description of the instruments to be employed, I must refer you to other sources, and especially to Mackenzie's latest work on Growths in the Larynx, and to Holmes' excellent book on the Surgical Diseases of Children.

There are, however, a few considerations of a practical nature that I wish to impress upon you. It seems clear to me that, whenever it is possible to familiarize the patient to the operation, it is far better to remove the tumor by operating through the mouth than to perform tracheotomy. Thus, in the great majority of cases

in adults, the removal can be effected with complete success and entire safety in this manner. Nor must you be deterred by the extreme youth of any patient from making repeated and persevering attempts to familiarize the throat to the presence of laryngoscopic instruments, so that, if possible, an accurate examination may be made and the growth removed *per vias naturales*.

The fact that such a result is possible is proved by several successful operations at the ages of four, five, and six years. It must not be forgotten, however, that there is a strong tendency in children to spasmodic exacerbations of the dyspnoea, which may induce death; and I would therefore urge you, during the treatment preparatory to operating through the mouth, to have the child constantly watched by some one capable of performing tracheotomy and thus affording immediate relief if dangerous symptoms of suffocation should appear. Of course, also, if the patient does not come under your care until there is an extreme degree of habitual dyspnoea, it is impossible to wait until the fauces are educated to bear the presence of a laryngeal mirror, and tracheotomy must be performed, and the tumor removed at some subsequent period, either through the mouth or through the tracheal opening. It is chiefly, however, in such cases as the one I have reported to you, where laryngoscopy was impossible, that the great difficulties of treating laryngeal tumors in children are manifest. I have tried to point out to you the manner in which, by a careful consideration of the symptoms, we may arrive at an accurate diagnosis. If, then, the symptoms are not urgent, the degree of habitual dyspnoea slight, and the paroxysmal exacerbations infrequent and moderate in severity, we should postpone active treatment, hoping that the symptoms may not become urgent until the child grows old enough to admit of laryngoscopic examination and operation. Mere aphonia, however complete, scarcely justifies the performance of so serious an operation as tracheotomy; but if dyspnoea grows progressively more and more severe, and the paroxysms more alarming, the operation should be unhesitatingly performed, even though the diagnosis rests only upon the general considerations I have discussed before you. The operation itself is a serious and difficult one, but in the hands of a skilful operator will generally terminate in the successful removal of the tumor and the relief of dyspnoea; but, unfortunately, it has happened in a large proportion of such cases that the patient has remained completely aphonic, or that the restoration of voice was very imperfect.

ORIGINAL COMMUNICATIONS.

OSTEOLOGICAL NOTES.

BY HARRISON ALLEN, M.D.,

Professor of Comparative Anatomy in the University of Pennsylvania.

THE BASE OF THE SKULL.

THE base of the skull, as defined by the anatomist, is a much more extensive region than that proposed by the surgeon. The former includes the entire inferior aspect of the brain-case and face, as opposed to the vertex and sides; the latter limits the "base of the skull" to a space almost synonymous with the roof of the pharynx. When a tumor is said to have its origin at the base of the skull, that portion of the anatomical base immediately above the pharynx is indicated. A description of a fracture which extends

through the base of the skull implies, not necessarily, but frequently, a lesion to the petrous portion of the temporal bone and the basilar axis. On the other hand, injuries or diseases occurring posterior to the foramen magnum are included in the region of the neck,—those anterior to it, in that of the face. So that, in speaking of the framework of the "base" from an anatomico-surgical standpoint, I will confine my remarks, if not to the roof of the pharynx, at least to the exclusion of the post-atlas space and the base of the temporal bone beyond the sulcus for the inferior portion of the Eustachian tube.

As thus limited, the "base" (*regio gutturalis*) is composed of three regions,—a central and two lateral,—the depression between these being occupied during life with fibro-cartilage.

Lateral regions.—Each lateral region is bounded *externally* by a line running along the inner margin of the glenoid cavity, to the outer margin of the carotid foramen and the inner margin of the jugular foramen. In those rare examples of union of the outer plate of the pterygoid process with the spinous process of the sphenoid bone, the outer limit of the lateral region is suggested by producing the line of the pterygoid process posteriorly towards the outer margin of the body of the sphenoid and the basilar process of the occipital bone. Examination of this region reveals three distinct portions, which may be called *otic*, *carotid*, and *Eustachian* or *tubal*.

The *otic* portion corresponds to that part of the petrous portion of the temporal bone containing the labyrinth. The greater portion of it forms the anterior wall of the petro-occipital groove ("die Sulcus an der unteren Fläche des Felsenbeines,"—Gruber). It is defined anteriorly and internally by the foramen lacerum medium, and posteriorly and externally by the jugular foramen. In size it is inconstant, but often small and wedged up towards the occipital bone. Occasionally minute ossicles are developed between it and the side of the basilar process of the occipital bone.

The *carotid* portion is defined anteriorly and internally by the foramen lacerum medium; externally and posteriorly by the carotid canal. Though often ridged and irregular, this portion may be, as is frequently the case with the negro, broad and concave. Crossing it from before backwards is a continuation of the vaginal process, which may now be called the *tympenic process*, to indicate its origin, in common with the vaginal process, from the *pars tympanica*. This terminates abruptly on a level with the commencement of the groove for the Eustachian tube. This process rarely extends backwards, to lie almost in contact with the occipital bone.

The *Eustachian* or *tubal* portion accommodates the cartilaginous (inferior) section of the Eustachian tube. Its inner extremity comes in contact with the sphenoidal tongue, while its outer is defined in front by the spinous process above named. In broad high skulls, with well-arched bases, the Eustachian portion may be imperfect; instead of its inner extremity reaching the sphenoid bone, it may fail in accomplishing this by a distance of some two or three lines. With the narrow low head, such as that of the negro, it almost invariably corresponds to the above description.

A probe placed so as to connect the mastoid process with the base of the internal pterygoid plate will lie along the vaginal process and the base of the styloid, and will nearly correspond to the axis of the Eustachian groove. It divides the base of the temporal bone into two natural portions: the parts in front of the probe are facial,—that is, have their relations with the face; those behind it are pharyngeal, or, more properly speaking, have their relations with parts other than facial. It is to this line and the parts about it that I would invite

particular attention. I have found in well-marked mature skulls of the Asiatic, European, and American races a decided tendency towards development of the spinous process into a large, broad, and often jagged prominence, which extends beyond the speno-temporal suture to impinge upon the carotid portion of the temporal bone. It at times crosses the freely-produced inner extremity of the temporal vaginal process, to make an X-like figure; in many cases it equals the latter process in size, and in a decided majority excels it. In the skull of the adult negro an opposite tendency is seen in the end of the vaginal process (near the origin of the transversely-placed "tympanic" process), presenting forwards and downwards a thin, rarely robust, pointed or hatchet-shaped edge. Not infrequently the spinous process is with such specimens inconspicuous, even when comparatively well developed, and is never of the blunt, knobbed, and massive appearance seen in the same process as met with in the skull of the Malay. The following table will illustrate these distinctions:

	Negro.	Hindoo.	Malay.
End of the vaginal process longer than the spinous	61	7	1
End of the vaginal process shorter than the spinous	11	21	26
Processes of about equal length	13	13	10
	85	41	37

It will be remembered that during the trial of Webster for the murder of Parkman, in 1850, a table of fragments of the skeleton of the murdered man, as identified by Prof. Wyman, was read in court. Among the items therein enumerated were "petrous portion of left side, jugular fossa, carotid canal, and fenestra ovalis," with "base of the right great wing of the sphenoid with foramen rotundum and foramen ovale, sphenoidal sinus, Vidian canal suture." Nothing is said of the spinous or vaginal processes; they were probably mutilated or absent. It would be well hereafter in examining fragments of human crania to observe the relations in size of the processes last named. Should the inner edge of the vaginal process be found prominent and longer than the spinous, the probability would be that the remains were those of a negro. Conversely, if the spinous process were larger than the vaginal, or if the produced extremity of the latter were absent, the chances would be that the remains were *not* those of a negro. This would be proving little, it is true, but more than could be secured from any other fragments of the same size, and quite as much as from any single character.*

Central region.—The central region is bounded anteriorly by the posterior nares, posteriorly by the anterior edge of the foramen magnum, and laterally by the temporo-basilar depressions. Like the lateral regions, it is divisible into three portions,—anterior, middle, and posterior,—which are limited by transverse lines, as follows:

The *anterior*, confined to the body of the sphenoid bone, lies between a line (occipito-sphenoidal junction) joining the bases of the sphenoid tongues (sphenoidal-vaginal process of Henle) and the ellipse of the posterior nares. The surface includes two concavities, with the median articular surface and *alæ* of the vomer. **Vomerine crest.**—A small but noticeable crest placed on either side of the vomer—serving to define the narial ellipse superiorly—fixes the point where the pharyngeal mucous membrane is continuous with that of the nose. Minute as is this crest, it is not without interest. It is not mentioned in the text-books, though often found in the skulls of the adult and senile conditions, while, as already mentioned, it gives a good

character, limiting the base of the skull from the cavity of the nose. In specimen No. 28 (College of Physicians) the sphenoidal tongues and the base of the vomer show evidences of ostitis, the intervening parts being healthy. When ridged and extending outwards, so as to rest upon the sphenoidal process of the palatal bone, the vomerine crest may well be said to be hypertrophied. This I have noticed in several examples of syphilitic ostitis; and in one striking specimen of a senile skull in the Morton Cabinet (No. 1007), not only is the crest prominent and furnished with numerous dendritiform processes, but the palatal bone, at a point corresponding to the line of the lower ethmoidal scroll, is marked with a patch of a similar outgrowth.

The *middle* portion is limited to that part of the basi-occipital process in advance of the muscular impressions, and corresponds to the pharyngeal portion of the base. It is, as a rule, smoothish, and rarely presents a central, minute, circular depression, which may be the remains of the large follicle at the roof of the pharynx, which, according to Luschka, is occasionally accommodated within the cancelli of the basilar process. The inclination of the plane of the basilar process presents two varieties,—the inclined and the horizontal. The former may join the body of the sphenoid *above* its inferior surface, so that an abrupt concavity or transverse notch is formed at the sphenobasilar junction. In but one specimen from among the five hundred or more skulls I have examined is there any evidence of the remains of the early obliterated occipito-basilar articulation. As a rule, a faint transverse ridge is always present at this point. The lateral margins of the middle portion are roughened. These are vertical, as a rule, though occasionally oblique from below upwards and within outwards.

The *posterior* portion is that part of the basilar process between the pharyngeal spine and the foramen magnum. It is marked with the depression of the anterior cervical muscles, and receives at the sides the anterior condyloid foramina. This portion is rarely the subject of osteoporosis. (See specimen No. 29, College of Physicians, and 1007, Morton Cabinet.)

I think any candid observer, after comparing a series of crania, will agree with me that the divisions here proposed are neither forced nor trifling. The *anterior* portion corresponds to the position of the body of the sphenoid bone, is immediately above the soft palate, and finds its complement in the Eustachian portion of each lateral region, since the orifice of the Eustachian tube of either side opens upon the anterior central portion. The physiological relations of this region are almost entirely with the face. The *middle* portion of the central region is limited to an intra-pharyngeal section of the basilar process, while the *posterior* pertains to its post-pharyngeal portion.

The roof of the pharynx, as seen with the rhinoscope, is the surgical "base of the skull." It includes the anterior and middle thirds of the central region, and is circumscribed by the superior constrictor muscle. The supra-pharyngeal aponeurosis extends along the boundaries to the orifices of the Eustachian tubes,—the superior constrictor, as is well known, not forming here a connection with the base. The surgical base is thus seen to be narrowed to a comparatively small area. Observation tends to show that extra-pharyngeal tumors rarely take their origin directly from it, though that such may be the case may be inferred from descriptions. A moment's reflection is conclusive that a tumor growing downwards and forwards would soon impinge upon the septum of the nose. But, in point of fact, it does not so incline, but early intrudes upon one or the other of the cavities of the nose. Indeed, a careful examination of the longitudinal section of the head will make it appear probable that a tumor origi-

* Among the noteworthy exceptions to the above distinction, see specimen No. 247 Wistar and Horner Museum, and specimen No. 1 Museum of College of Physicians.

nating from the body of the sphenoid bone will occupy the sinus, and, extending thence, will be more apt to appear within the nose, or even enter the brain-case than the pharynx. The mucous membrane of the pharynx has no nutritive connection with the sphenoidal or occipital bones; that within the sphenoidal sinus has, *per contra*, as exact a relation with the bone as that of the maxillary sinus has with the superior maxilla. The lowly-organized aponurotic tissues along the *sides* of the pharyngeal roof have, however, intimate relations with the pharynx and the *sides* of the "base of the skull." It is here most probably that naso-pharyngeal tumors, as a rule, originate. Prior to an operation, a tumor may appear to be pendent from the central region of the base, which will afterwards prove to have had a connection with one of the lateral regions. Dr. D. W. Cheever (*Boston Medical and Surgical Journal*, N. S., ii. p. 406) mentions the case of a young man aged 19 years, who submitted to a second operation, after an interval of six months, for the removal of a fibroid naso-pharyngeal polypus, so called. The note taken before the operation describes the tumor attached "at the base of the sphenoid bone and to the upper and back part of the pharynx." At the time of the operation, however, it is described as "attached to the base of the sphenoid, and to the upper, posterior, and *right* side of pharynx."

The foramen lacerum medium.—The size of the foramen lacerum medium is, together with the pars tympanica, a feature of the base of the skull worthy of more than a passing notice.

According to Gruber, the older Continental writers, including such authorities as Meckel and Weber, are apparently so little impressed with the importance or constancy of the foramen in question that they say nothing about it. They indeed speak of a lacerated foramen, thereby meaning the *posterior* lacerated foramen; no name is assigned the *median*, while the *anterior* is denominated the sphenoidal foramen. Arnold, following these anatomists, gives the title *petro-basilar fissure* to the *median*. Henle and Hyrtl virtually accept this method. The French authors mention an anterior lacerated foramen, which is the same as our sphenoidal foramen, and accept the posterior lacerated foramen, while denoting the median as the *orificium internum canalis carotici*. Gruber elaborates four foramina: first, *f. sphenoidal*; second, *f. lac. ant. int.* (the orifice of the median foramen seen from within the brain-case); third, *f. lac. ant. ext.* (the orifice of the same foramen seen from below,—i.e. the "base of the skull;"; fourth, the *for. lac. post.*)

It would appear from the above that the *petro-basilar fissure*, the *orificium canalis carotici*, and the two divisions of Gruber are all synonyms with the *median lacerated foramen* of the English text-books.

Why this confusion of terms? I believe it to be due to the fact that the foramen varies in size with the general shape of the skull, upon which, indeed, it is dependent. Thus the foramen is smaller in a long-faced slender head than in a short-faced broad one. It is necessary to exclude here skulls elongated by synostosis.

An examination of eighty negro skulls, which, as is well known, belong to the former group, showed an almost invariable contraction of this foramen. In eleven of this number it was absent,—the apex of the petrous portion of the temporal bone fitting closely to the sphenoid bone and the basilar process. With skulls of the short-faced races, such as the Malay and the Chinese, the foramen was nearly always ample.

Hilton believes that the petrous portion of the temporal bone is an important agent in determining the shape of the face, and adduces in support of his position the changes which take place in the direction of the

petrous bone from the immature to the adult condition. In the child the bones are more transversely placed than in the adult, with whom the angles of their produced axes would be acute, and lie far in advance of the *foramina lacerata media*. Without accepting this view as correct, since Mr. Hilton's position is not one against which exception may not be taken, it is certainly suggestive that in prognathic skulls the petrous portion of the temporal bone is apt to be narrow and triangular, and tends to press against the body of the sphenoid, as is the case in the quadrumana and quadrupeds generally: whereas in the orthognathic heads the ample foramen is associated with a broad irregular base, often permitting the carotid groove of the sphenoid bone to be visible from beneath. When the foramen is very open, the sphenoid bone sends forward across the opening a curious Y-shaped process, for the purpose of supporting the carotid artery in its ascent to the brain-case. In specimen No. 29 (College of Physicians) this process is blunted, and, passing through the foramen, appears upon the base of the skull between the right lateral and middle central portions.

CALCIFIED LOBULES OF THE LUNG.

BY W. C. KLOMAN, M.D.,

Baltimore, Md.

CASES of phthisis are occasionally met with where, besides the usual sputa, the patient at various times expectorates numerous calcareous concretions, of an elongated, irregular form, and with surfaces more or less nodulated. They vary in size, some being scarcely one or two lines long, others being one-fourth of an inch in length. I have no doubt that every one who has observed cases of phthisis is familiar with the appearance of these concretions, but I do doubt whether it is as generally known that they are themselves lobuli of the lung, which have undergone the cheesy metamorphosis and have afterwards become calcified.

My attention was first called to this by the statement of Prof. Rindfleisch, of Bonn, in his work on Pathological Histology, in which he asserts that, by macerating these bodies (which are known by the several names of calcareous concretions, pulmonary calculi, or lung-stones) in dilute hydrochloric acid, the remains of lung-parenchyma can be shown under the microscope.

Some of these calculi having recently been brought to me for examination by a friend who has a case of this kind—phthisis calculosa—under his care, I macerated one of them in dilute hydrochloric acid until the salts of lime were entirely removed. Minute bubbles of gas being disengaged in this process, proved the presence of the carbonate of lime. I did not test for the presence of the phosphate of lime, although I have no doubt it was also present. After having lain in the acid until it was perfectly soft, the calculus still retained the same shape and size it had before maceration. I next proceeded to make a thin section, and submitted it to microscopic examination. I found the distinct remains of lung-tissue,—i.e. septa of the alveoli, yellow elastic fibres, lung-pigment, granular debris, tablets of cholesterine, etc. The two last mentioned are evidences of the previous caseous metamorphosis, being the remains of the cellular elements, which have been entirely broken up, while the fibrous tissue has resisted the destructive tendency and is preserved.

The process by which these concretions are formed may be briefly stated as follows: According to the doctrines of modern pathology, tubercle is the result of an infection from a depot of caseous material situated at some point in the body, which is the result and remains of a previous inflammation, or from some

caseous material introduced into the body from without. Minute particles of this material are conveyed by the lymphatics, and cause the deposition of miliary tubercles in the perivascular lymph-spaces surrounding minute arteries, into adenoid tissue wherever found, or into mucous membranes. When thus deposited,—say around an arteriole supplying a lobule of the lung,—the tendency of the tubercles is gradually to close the lumen of the vessel, and thus to diminish the supply of nutriment. The tubercles deposited at the same time in the walls of the alveoli effect a thickening of them and slowly encroach upon their lumen, which is further diminished by an increase of secretion, the result of a reactive inflammation,—a catarrhal pneumonia, excited by the presence of the tubercles. Numerous young cells, of low vitality and of a perishable nature, are thrown off, and mutually compress one another. There being then a diminution of the supply of nutriment, together with an increased number of cells to be nourished,—which latter at the same time crowd and compress each other,—the result is fatty degeneration. If the vessels are entirely obstructed and nutrition ceases, the part affected softens, the cellular elements break down, the fluid of softening reaches the surface of some adjacent bronchus by ulceration, and is eventually expectorated. If, however, the circulation of the nutritive juices is not completely cut off, but is only retarded, this fatty degeneration and softening is arrested; the more fluid portions are absorbed; what remains behind becomes more and more inspissated, and undergoes the cheesy metamorphosis. Into this the salts of lime, the carbonate and phosphate, are gradually deposited, and by this means all further metamorphosis is rendered impossible. The parts so calcified remain unchanged and quiescent, until they excite a separating inflammation in their surroundings, by which they are loosened from their connections and cast out with the sputa whenever a bronchus of a calibre sufficiently large for their passage has been opened.

The so-called "bronchial stones" must not be mistaken for and confounded with the true calcified lobules of the lung. The former are occasionally found in lungs affected with chronic bronchial catarrhs, and consist only of muco-purulent secretion which from any cause is retained in the bronchus and obstructs it. This gradually inspissates and undergoes the cheesy metamorphosis, with the subsequent deposition of the salts of lime, the sequence of changes being the same as in the former case.

SCIRRHUS OF THE HEAD OF THE PANCREAS.

BY W. H. WEBB, M.D.,

Philadelphia, Pa.

CANCER of the pancreas is comparatively a rare disease, and especially rare is primary cancer. In the case which I am about to record, the malignant growth was strictly limited to the organ, and was discernible during life.

Samuel E., sixty years of age, a blacksmith by occupation, and without hereditary tendency to disease, as far as could be ascertained, began to complain, about eighteen months ago, of being easily fatigued and of an occasional feeling of soreness in the epigastric and right hypochondriac regions. Being a man of strictly abstemious habits, he was at a loss to account for the "pain and wretchedness" from which he now and then suffered. This condition continued until the 12th of January, 1871, when, owing to increased pain and debility, he was obliged to give up his work and seek medical advice. He stated that when he abandoned his occupation he was

jaundiced, but that this condition varied in its degree, being at times more intense than at others. The bowels were occasionally loose, which he attributed to "strong food," but on a restricted diet they became more regular. He had also been troubled with nausea, and had vomited several times during the early part of his illness.

On the 25th of June, when I first saw the patient, I found him to be slightly jaundiced, with a haggard face and expression indicative of severe suffering from some serious chronic disease. The tongue was slightly coated with a whitish fur; the pulse 90, full, but feeble; the hands and feet cold; the skin dry and harsh; the appetite impaired; and the bowels inclined to be constipated.

He complained of great weakness, loss of flesh, and a burning in the back and epigastrium, which was very severe at times, and accompanied by sharp, shooting pains, occurring from two to six times during the twenty-four hours. The most prominent symptom, however, was a peculiar gnawing sensation in the back, opposite to the eighth dorsal vertebra. On examination of the abdomen while the patient was in a recumbent posture, a hard, solid, resisting tumor was felt about one inch and a half to the right of the median line, and about two inches above the umbilicus. It was very sensitive to the touch, immovable, without murmur, and limited in size. I felt confident from its location that it was connected with the pancreas, and, from the appearance and condition of the man, that it was of a carcinomatous nature. In order to confirm the diagnosis, I sought a consultation with Dr. Da Costa, who, upon a careful examination, pronounced it to be scirrhous of the head of the pancreas.

On the 3d of July, fatty food was used as a test, and the result was fatty stools; and this experiment was again resorted to two weeks later, with a similar result.

During the period that I attended him, he had no return of the vomiting, and only slight jaundice. A peculiarity quite noticeable was the position of his body, which, on either standing or sitting, was slightly inclined forward, and he seemed more at ease when erect than when recumbent.

September 18.—The patient has been comparatively free from pain for the past three days; the pulse 80, feeble, and easily compressible; articulation difficult. Death ensued from exhaustion on the following afternoon.

Autopsy, twenty hours after death.—No cadaveric rigidity; emaciation extreme. Abdomen only inspected. Between the viscera were extensive adhesions, some of which were quite recent and easily broken up, while those around the tumor were tough and required the use of the scalpel for their division.

The lesser end and body of the pancreas were unaltered, but the head was of twice the normal size. The descending portion and part of the transverse portion of the duodenum were adherent to the outer surface of the tumor, and a band of lymph about two lines in thickness extended transversely across the middle of the duodenum from before backwards, and was attached at each end of the tumor. The exterior portion of the growth was of cartilaginous hardness, while the interior was soft and lacerable. The gall-bladder was full, but not distended, and free from concretions. The splenic artery was not affected. The ductus communis choledochus was but little compressed. On microscopic examination of the structure of the tumor it was found to be that of scirrhous.

ALBUMINURIA IN SMALLPOX.—The *Lyon Médicale* of September 3 (*Lancet*, October 21, 1871) has published several cases of variola in which this complication was noted, with these deductions: 1. Albuminuria has been noticed in confluent smallpox in about one case in five. 2. Albuminuria is most frequently only temporary, and does not interfere with the progress of smallpox. When permanent, it may bring on the mischief wrought by Bright's disease. 3. Even when transitory, albuminuria may give rise to severe symptoms, as eclampsia. 4. In hemorrhagic smallpox, albuminuria is persistent, whether connected with a lesion of the kidney, whether it depends upon contamination of the blood, or be owing to a combination of both phenomena.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

CLINIC OF PROF. AGNEW, SEPTEMBER 13, 1871.

Reported by Dr. Elliott Richardson.

COMPOUND FRACTURE OF FINGERS.

THE subject of this injury, a man aged 26 years, four days previous to his presentation at clinic had the second and third phalanges of the index and middle fingers of the right hand so badly mutilated by contact with a rapidly-revolving fly-wheel, that death of these portions followed. The lecturer said amputation of parts of the injured members would be necessary. He would remove the middle finger at the metacarpo-phalangeal articulation, as the retention of any portion of the first phalanx of any finger except the index, where amputation so high is rendered necessary, is rather detrimental to the usefulness of the hand than otherwise, for, the points of insertion of the tendons of the flexors and extensors of the finger being removed, the mutilated member will not accompany the other fingers in their movements, but will remain stationary, or nearly so, and will often be found in the way in many occupations of life. Indeed, it has been advised by many operators to remove the head of the contiguous metacarpal bone, with a view of allowing room for the approximation of the metacarpal bones of the adjacent fingers, by which the unsightly gap, otherwise prominent, will ultimately be obliterated. This proceeding is only justifiable, however, in those who value symmetry above utility, and is not adapted to those who are obliged to earn a livelihood by manual labor, in whom it is best to preserve the palm of the hand as nearly as possible in its original dimensions. With regard to the index-finger, a totally different rule applies.

Here the advantages of preserving a prominence which can be brought into apposition with the thumb are very great. Hence the rule in amputations of the index-finger is to save all that is possible. Ether was then administered, and the middle finger removed at the metacarpo-phalangeal articulation by the oval-flap method.

Amputation of the index-finger was performed in the lower third of the first phalanx by lateral flaps. The arteries of the part being somewhat enlarged, it was found necessary to ligate two of them. The sides of the oval flap were then approximated by one silver suture and adhesive strips; the lateral flaps by adhesive strips alone, lightly applied, so as to avoid pressure over the end of the bone. Dilute tincture of opium was then used as a dressing, and the arm bound upon a straight palmar splint. In cases of amputation so near the metacarpal bones there is a great tendency to the subsequent formation of palmar abscesses, but, Prof. Agnew said, by arranging the dressing so that moderate pressure would be made at the base of the fingers on the palmar surface, burrowing might be prevented.

October 9.—The patient has not done so well as was hoped. On the third day after operation the dressings were removed, when the stump of the middle finger was found to have progressed favorably, but gangrene of the flaps of the index-finger had occurred, rendering amputation of the remainder of the first phalanx necessary. This was performed eight days later. The patient has since then done very well, and at this date is practically well.

CHRONIC ABSCESS OF THE BUTTOCK.

This man was 25 years of age, was somewhat emaciated, and evidently broken down in health. He had suffered from pain in the gluteal region of the right side for seven years past, and nearly a year ago noticed swelling in the right buttock. The swelling at the time of his presentation at clinic was deeply situated in the region of the posterior superior spinous process of the ilium, and was about the size of an egg, though not very sharply defined. It was the seat of much pain, which extended from it down the limb in the course of the branches of the sciatic nerve. There was some

tenderness on pressure, but no great amount of heat in the part, nor any decided discoloration.

Prof. Agnew said that from these symptoms, taken in connection with the facts that there was no pulsation in the tumor, that it was not situated in the line of any large artery, but was in a region where muscular resistance was slight, that the patient's appearance indicated a depraved condition of health, and that there was in the axilla a chronic abscess which had existed for the past eight months, he should conclude that this growth was also a chronic abscess, and should direct treatment accordingly.

It was usual, he said, in cases of this character to avoid operative interference as long as possible, unless by pressure upon important parts of the body, or extensive burrowing, danger would be incurred by delay. As there was no urgent cause of this character existing in the case, the patient was advised for the present simply to attend to the improvement of his general health by the use of tonics.

NECROSIS OF TARSUS.

The patient was a pale, thin boy of nine years, with light complexion and hair. He had enlarged lymphatic glands in different parts of the body, and presented other evidences of scrofulous diathesis. Fifteen months ago he fell, injuring his right ankle. This injury was followed by pain, swelling, and, finally, suppuration, first pointing on the inner, then on the outer, side of the ankle.

These abscesses had opened subsequently at these two points. When presented at clinic there was much swelling in the neighborhood of the ankle. He had on the outer side of it an opening, scarcely papular in character, situated a little above and in advance of the external malleolus, which discharged but little, and, on the introduction of a probe, was found to extend a distance of an inch or two obliquely downwards, but did not appear to communicate at this time with any osseous structure. Situated on the inner side of the foot, on a line with the internal malleolus and a little in advance of it, was an ulcerated surface of about one inch in diameter, near the centre of which was a fistulous opening. Prof. Agnew introduced a probe at this opening, which passed down without difficulty until it came in contact with denuded and necrosed bone; this he thought was the scaphoid. The lecturer then alluded to the obstinate character of joint-injuries due to the presence of a synovial membrane and the large amount of cancellated osseous structure existing in their vicinity. He also referred to the influence of inherited or acquired constitutional diseases in rendering these injuries more serious, which was well illustrated in this case, where a strumous diathesis was so plainly evident. Prof. Agnew said he thought no operation justifiable in this case. He had seen cases of this character recover without operative interference, and he believed that by placing the patient under judicious treatment the necrosed bone would in time separate and be discharged from the opening,—that the latter would then close and recovery follow.

He directed the limb to be placed in a nicely-fitting binders-board splint, extending from below the knee to the toe, covering in the heel and one side of the ankle, and leaving exposed the ulcerated surface, which should be dressed with simple cerate or other mild application.

The patient was enjoined to scrupulously avoid using the foot in walking, but was permitted to go about on crutches.

Three weeks after this treatment had been adopted, a decided improvement had taken place. The ulcerated surface had healed, leaving only a fistulous opening. Swelling had diminished considerably, and the patient was suffering much less pain. Several small fragments of bone had come away during that period.

NECROSIS OF FEMUR.

This case was reported in the *Times* for August 1 of the present year. Since his previous visit to us in June last, he had been working moderately without much inconvenience. Several fragments of necrosed bone had come away since that time, and the usefulness of the limb had much improved. Pain, however, still continued whenever the limb was brought into action. A probe was introduced, and the sequestrum still felt at a considerable depth from the surface. Prof.

Agnew directed the man to continue using moderate exercise, but if in the course of eight or ten weeks the pain should become so severe as to seriously interfere with his occupation, an operation for the removal of the sequestrum would be advised.

CLINIC FOR DISEASES OF THE SKIN, NOVEMBER 1, 1871.

SERVICE OF DR. LOUIS A. DUHRING.

Reported by Dr. Arthur Van Harlingen.

PHTHEIRIASIS AND LOCALIZED ECZEMA.

J. B. is a German, aged 50. He comes before the class to-day for the first time, complaining of an eruption on his head, accompanied by constant itching over the whole scalp. It annoys him most at night, after his head becomes warm on the pillow; at such times it seems almost unbearable.

He has been troubled in this way for the past five years. He has himself never suspected the real cause of his troubles, but if you will examine his head as he walks around the amphitheatre, you will not be long in finding it out. You will observe that his head is literally swarming with pediculi, which may be seen running up and down the shafts of the hairs or hiding among their roots. The irritation caused by the bites of these insects has driven him to scratch and tear his scalp with his finger-nails, until, as you see, it has become covered with excoriations. All the discomfort which this man endures is due to the presence of pediculi. Of these parasites three species exist and have been described. The *Pediculus capitis*, as its name indicates, is confined to the head,—rarely descending below the neck. It is sufficiently large to be discerned with ease by the naked eye. The *Pediculus corporis*, or *P. vestimentorum*, inhabits the clothing, from which it makes predatory excursions upon the skin, covering the trunk and lower extremities.

Its hooked claws enable it to instantly grasp any object with which it may chance to be thrown in contact, and it clings particularly to woollen clothing. In searching for this species of louse, I advise you to look with great care along each seam of the woollen under-garments, as otherwise the presence of these insects may easily be overlooked.

The third variety is the *Pediculus pubis*. Rather smaller and of a more circular shape than the two former, this species of pediculus is usually found clinging to the hairs over the pubes and genitalia, and sometimes in the axilla.

Phtheiriæsis, the disease to which these insects give rise, is by no means confined to the filthy and degraded. Experience has shown that no class is exempt, for we frequently find it among people of the best social position and among those who are scrupulously neat in their habits.

This man was very much surprised when I told him what was the matter with him. He had had no suspicion of the presence of these parasites, and could scarcely believe my assertion. You will often find that your patients who may be afflicted in this way will be very much surprised when you tell them the real state of the case, for the disease may go on for years without the cause being suspected, and treated as pruritis, or even prurigo.

Now, having made our diagnosis, the first thing we want to do is to kill the pediculi, and then get rid of them. To this end I shall direct the patient to rub thoroughly into his head to-night a quantity of coal-oil sufficient to soak each individual hair. As his hair is rather thin, a teacupful will probably be enough, but a sufficient quantity should in any case be used to saturate the whole head, so that each pediculus may get the full benefit of it. After this application he will cover his head with a flannel cap, made for the purpose, which he will keep on until to-morrow morning; then he will wash his head thoroughly with Castile soap and warm water.

The coal-oil is to be rubbed into the head to-night in the manner I have described, and to-morrow he will present himself for inspection, that we may see whether the remedy has been efficiently applied. Coal-oil, you will find, is not only the cheapest, but also one of the most effectual, parasitocides you can use. It can be found everywhere,—is cheap and easy of application. It can have no injurious effect

whatever on the hairs; but you must remember to tell your patients to beware of going near a light after making the application.

If you will examine the hairs themselves in this case, you will see attached to many of them—seldom near the skin, but more generally towards the free ends—one or more small pearly points. These are the nits or ova of the pediculus, and, unless they are killed and gotten rid of, our parasiticide will be of no avail, for in a few days they will hatch out, and the patient's head will again be swarming with a new crop of insects.

The best method of removing the nits is by alkaline washes and a fine-toothed comb. It often happens that after we think they are entirely gone, the lapse of a few days will find them again quite numerous. The only thing to do in this case is to persevere in our efforts until the last one is removed. The excoriation, to which I drew your attention as a result of scratching, is an artificial eczema of a mild character. The irritation being removed, in all probability this will spontaneously disappear. If it should not do so, an application of some mild ointment will hasten its cure.

Before this patient leaves, I want to call your attention particularly to an eruption which he bears upon his upper lip.

It is scarcely necessary to say that this is in no way connected with the affection of the head; though instances are known in which pediculi have been found in the beard.

This eruption, you will observe, is characterized by considerable inflammation and infiltration of the tissues about the upper lip. It resembles, and is likely to be mistaken for, a rather rare disease,—*tinea sycosis*, or barber's itch.

I shall not at present enter into the differential diagnosis between the two diseases, but only remark that what we have here is simply a case of localized eczema, such as we saw upon the eyelid of a man who was before the class a few weeks ago. It is in a chronic condition,—the man tells us he has had it a long time,—and it will be at least two or three months before it is entirely cured. I shall direct the affected part to be well rubbed with *sapo viridis* every morning and evening, and, after this is washed off, to be kept dressed with unguentum diachylon day and night. Moreover, the man is to keep his lip shaved as closely as possible.

ECZEMA IMPETIGINOSUM.

This little boy, a year and a half old, makes his appearance for the first time. He presents an eruption which is confined to the legs; the rest of his body is, as you see, entirely free. His mother states that his general health is good,—that he eats well, sleeps well, and that his bowels are regular; the affection, then, is a local one. These dark-greenish crusts, surrounded by inflammatory areole, which you see scattered over the right leg, especially near the knee, are the points where the disease first manifested itself. They have gone through the various stages of papule, vesicle, and pustule, and remain as crusts or scabs. The mother tells us that the affection has existed about four weeks.

On the other knee you will see the eruption in its earlier stage. Here the appearance presented is quite different. These spots have only reached the vesicular stage; they have, in fact, only made their appearance within the last twenty-four hours. The rapid progress which has been made in that time is quite characteristic of this disease. We have here eczema impetiginosum, the impetigo of the older dermatologists, and one of the most common of all the diseases of the skin to which children are liable.

Having made our diagnosis, the treatment is easy and simple. Here we need no complicated formulæ, so long as the eruption runs its ordinary mild course. In a disease of this nature it is always well to ascertain if there are worms present in the alimentary canal. The eruption produced by ascariæ is often followed by an eruption like that we have before us, and when these are found we should at once take measures to remove them.

No such source of irritation existing in the present case, we need merely apply some simple ointment. Ceratum simplex even might answer, but perhaps something a little more stimulating would hasten the recovery.

Unguentum zinci oxidi, or preferably an ointment containing the ammoniated chloride of mercury, may be recommended.

The latter should not be the officinal ointment, which contains forty grains to the ounce, but a milder preparation:

R Hydrag. Ammonio-Chlorid., gr. v;
Adipis, 3j.

Misce, fiat unguentum.

Before applying any ointment, we must have these crusts entirely removed. If we merely tell this child's mother to apply the ointment, she will rub it into the crusts. We might apply ointment in this way indefinitely without the slightest benefit. We therefore direct that these crusts shall first be removed, either by soaking them in warm water and Castile soap, or by the application of poultices. When they are out of the way, we shall have the ointment, in small quantity, applied three times daily, and when this child is again presented, a few days hence, we shall probably observe a decided improvement to have taken place. Should such not be the case, however, and should little or no improvement be manifest after persevering some days longer, we shall be justified in concluding that the disease depends on a vitiated condition of the system, and shall make a change in our treatment, with a view to reaching the cause, if possible.

JEFFERSON MEDICAL COLLEGE.

SURGICAL CLINIC OF PROF. S. D. GROSS, NOV. 1, 1871.

Reported by Ralph M. Townsend, M.D.

MEDULLARY ROUND-CELLED SARCOMA OF THE LEFT TONSIL.

A MARRIED woman, aged fifty-four years, but who looks to be sixty, from her emaciation and suffering, applies for relief on account of an enlarged tonsil, the tumefaction having been first noticed eight months ago. Examination reveals a tumor projecting into the left side of the throat from between the arches of the palate, and throwing the uvula forwards and to the right side. This tumor proved to be the left tonsil, immensely enlarged; but the affection is evidently something more grave than simple hypertrophy. It does not look angry enough to be encephaloid, and there is no venous enlargement apparent upon the surface, nor is there any ulceration, which in all probability would have existed had this case been one of epithelioma.

The tumor can readily be felt through the tissues of the neck, and a lymphatic gland of the size of a bean was detected at the anterior border of the sterno-mastoid muscle. The growth seriously interferes with articulation, deglutition, and respiration, and these effects become daily more serious.

It occurred to Prof. Gross and his colleague, Prof. Pancoast, that the *écraseur* would be the instrument best adapted for the removal of the mass. Accordingly, by means of strong steel pins, crucially inserted, the tonsil was transfixed at its base, and the chain of the *écraseur* slipped behind the transfixing pins. The mass, however, proved to be so soft and friable, that as the chain was tightened the pins gradually cut their way through, and only a few fragments of it were removed.

The woman, meantime, to whom no anæsthetic had been given, remained in the upright posture, perfectly conscious, and giving courageous and active co-operation to the operator. The *écraseur* having failed, Prof. Gross determined to enucleate the mass; and this—partly by means of instruments, but principally by the aid of his fingers—he succeeded in doing. The woman lost but little blood, and a favorable change in the character of her breathing was immediately apparent.

A portion of the specimen was submitted to Dr. Bertolet for microscopical examination, who made the following report:

"The mass of the tumor presents a reddish-white, homogeneous appearance, and feels soft and elastic to the touch. A small quantity of cloudy fluid can be scraped with the knife from its cut surface. The microscope shows the presence of small, round cells, with very little protoplasm, and very friable, so that the comparatively large nuclei with their shining nucleoli are usually seen free from the body of the cell. The intercellular substance is very sparsely developed, and of a hyaline, almost formless, appearance. No alveolar arrangement being found throughout the growth, we do not hesitate to designate it a medullary sarcoma."

This patient afterwards reported at the clinic on the 4th and 8th days of November. At the latter date the parts were granulating nicely, and the surface whence the tumor was removed was perfectly clean. The raw surface is touched every other day with a twenty-grain solution of the nitrate of silver, tincture of chloride of iron and milk-punch being given to invigorate the system.

MEDULLARY ROUND-CELLED SARCOMA.

Prof. Gross at this clinic also removed a medullary round-celled sarcoma from the neck of a young man, aged 27 years, from Lehigh County, Pa. A similar tumor was removed from this patient in the same situation, by the present operator, the previous August, and the operation was conducted with the greatest possible care. A primary operation, by another surgeon, had been performed previously. The tumor was of a globular shape, firmly attached, and quite vascular.

Prof. Gross stated the prognosis to be of the very worst character, this form of disease being as liable to return as encephaloid.

TORTICOLLIS.

A. S., aged 19 years, has had rheumatism of the neck, the consequence of which is shortening of some of the cervical muscles and a disagreeable deformity. The head is twisted to the right and downwards, and is incapable of being moved in the opposite direction. At first sight the sterno-cleido-mastoid muscle seems to be the one affected, but closer examination shows the shortening to exist in the trapezius, splenius, and probably complexus muscles. No disease of the cervical vertebrae is apparent, yet it is very probable that periostitis of the pieces of the skeleton may exist.

Prof. Gross stated that there was no necessity in this case for the use of the knife, but that constitutional and local means must be relied upon for making a favorable impression upon the affected structures. As the muscles of the neck are painful, and intolerant of motion and manipulation, this patient will take every night at bedtime, in pill form, ten grains of Dover's powder combined with one-eighth of a grain of the sulphate of morphia. Occasional doses of infusion of senna and sulphate of magnesia will be given to regulate the bowels, and the patient will live principally upon vegetables, milk, and stale bread, eating no beef.

Locally—

R Veratrina, 3j;
Cerat. simp., 3j.—M.

S.—A portion the size of a marrow-fat pea to be rubbed along the sides of the spinous processes of the cervical vertebrae, night and morning, with the bare fingers. Before each application the neck will be well washed with soap and hot water, and passive motion instituted.

In the more simple forms of wry-neck, caused simply by muscular contraction, and when the case is comparatively recent, recovery may be generally looked for. If the deformity is complicated with organic disease of the spine, by serious lesion of the nervous system, or if a large number of muscles are implicated in the contraction, the prognosis is far less favorable.

RETENTION OF URINE, DEPENDENT UPON SPASMODIC STRICTURE.

A. L., aged 43 years, has not passed any urine for three days except that which dribbled away in consequence of the incontinence of retention. Quite a tumor is visible in his supra-pubic region, which is painful on pressure and dull on percussion. Just before the retention he was exposed to cold. He also suffered from gonorrhœa nineteen months ago, and lately has noticed a diminution in the size of his urinary stream.

A catheter was introduced without difficulty, and two quarts and a pint of straw-colored urine were drawn off. No sign of stricture existed. The man's bowels being constipated, he was ordered to take at once an ounce of Rochelle salt. He was also directed to stay in the house, in bed, and keep covered up warm. Also,

R Pulv. Ipecac. comp., gr. x;
Morphiæ Sulph., gr. 1/6.—M.

Ft. in pil. ij.

S.—Take at one dose, and repeat in six hours.

November 15.—This patient again reports at the clinic, and is yet unable to pass his water, Dr. Hearne, one of the clinical assistants, having had to pass the catheter upon him twice daily. The bladder is evidently paralyzed from the effects of its over-distention. The patient's appetite is good, although he suffers from constipation, and pain is present only when the bladder is distended. He was therefore ordered

Tinct. Ferri Chlor., gtt. xx;

Ext. Fld. Ergot., ʒi;

Strychniæ Sulph., gr. $\frac{1}{16}$.—M.

S.—Take this quantity, in water, four times daily.

The patient was also directed to take the wet end of a fringed towel and strike himself vigorously over the abdomen and small of the back, such procedure being described by the lecturer as a powerful stimulus. The man will still keep himself well protected from cold, and subsist on diet easily digested yet sufficiently nutritious. His urine will be drawn off at least three times in the twenty-four hours, the patient meanwhile being instructed how to introduce the catheter upon himself.

HOSPITAL FOR DEFORMITIES AND DISEASES OF THE NERVOUS SYSTEM.

THE clinics at this institution have been gradually increasing in interest, and now present a great variety of the most rare and instructive cases. In a visit lately made to one of Dr. S. Weir Mitchell's morning clinics, we were much struck with the number of cases which elsewhere would be looked upon as exceptional. The mode of carrying on the work is also instructive. Every patient is carefully examined by Dr. M. in person, and every point in the history noted with care by the assistants, so that for every case there shall exist a complete statement as to hereditary influences, personal appearances, and symptoms, while in cases of value, the utmost pains are taken to follow up the patient, and to learn from his physician what cannot be otherwise ascertained. The æsthesiometer, dynamometer, thermometer, and electric tests of muscles are all in habitual use; and it is worthy of remark that, whenever it can be done with propriety, the patient is stripped for final inspection. The treatment is then decided upon, and when it involves electricity, the patient is directed to return in the afternoon, when the assistants attend for the purpose of electrization.

A little slip of paper is fastened on the wall for every patient undergoing electric treatment. On this the name is noted, the form of battery employed, the force or number of cells used, and a record of each sitting is made,—these data being finally transferred to the case-books.

We were struck with the great number of cases of infantile palsy at every clinic. Dr. Mitchell believes that success in the treatment of these cases depends upon the stage of the disease at which they apply for treatment. If they come within a few weeks of the attack, the prognosis is best, and it becomes more unfavorable as time passes without treatment.

The success in dealing with the neuralgias of the working-class is quite notable. Belladonna is employed in most of them, but in small and frequent doses, while cod-liver oil and the acid phosphates appear to be the favorite tonics; and these, with the local use of galvanism, constitute the chief treatment.

At the last clinic we saw a woman who had suffered from neuralgia and feebleness of the right arm, the attacks seeming to be due to overwork with the needle, and always brought on by sewing. A smart tap of the hand would dispel the attack, which, however, soon returned if she continued her work. Tonics were ordered, and a treatment which is said to be here in frequent use. It consists in covering the whole limb with a liniment of turpentine, sweet oil, and strong sulphuric acid. Dr. M. thinks that the value of the treatment consists in not confining the medication to the painful part, but in irritating the entire surface of the limb.

Dr. M. remarked on the slight tenderness of the median nerve, and spoke of the use of ice to relieve neuritis. It is kept applied over the nerve, night and day, for a week or two. In a case which we saw at one of his clinics, a severe sciatic neuritis had been rapidly relieved by this method. In this

patient galvanism has also been employed, locally, with marked benefit. We should add that the hand-neuralgia above described was cured in a few days by the liniment directed.

A lad from Elkton, Md., was the next case. He had palsy of the right shoulder and arm, from his shoulder and neck having been run over, five years ago, by a cart. Dr. M. described this case as noteworthy, because, with extreme atrophy of the muscles and absolute loss of voluntary power, sensation was entire, and the muscles readily responded to electricity; on which fact he founded a favorable prognosis, entirely justified by the circumstance that at the first sitting the patient reacquired power over every wasted muscle, and is now gaining rapidly.

The next case was ataxia with extreme plantar anæsthesia. There had been no ocular symptoms, except diplopia for a short time; and in this connection we may say that here in every case of central disease the ophthalmoscope is used.

Dr. M. remarked that, in the present instance, the patient not only could not walk when blindfolded, but that, curiously enough, he had been able to do so until his physician had told him of the usual difficulty in walking, since which time he had become, as he said, nervous about it. The patient acknowledged to having had syphilis, and the doctor observed that, even in those cases of this disease where there was a syphilitic history, he had yet to see one in which an anti-syphilitic treatment had been of any benefit.

Our attention was next called to a case of partial palsy of both arms,—probably of rheumatic character. The joints were diseased in one hand, and Dr. M. spoke of the difficulty at times arising as to whether such lesions were directly rheumatic, or due, as seemed likely here, to the central lesion. A patient with arthritis from injury to the axillary plexus, who came to a recent clinic, afforded a good illustration of joint-disease simulating rheumatism, which arises from extra-central nerve-injury.

We are glad to learn that, owing to private gifts and the State endowment of \$10,000, this valuable charity has become possessed of a permanent home in larger quarters.

COXALGIA IN EARLY CHILDHOOD.—Dr. Mettenheimer, after alluding (*Journal für Kinderkrankheiten*, Heft 3 und 4) to the great infrequency of inflammation of the joints during the first year of life, reports the case of a child in whom coxalgia was developed at the early age of eight weeks. At this time the mother was alarmed by the constant cries of the child, who had previously been supposed to be perfectly healthy. Upon examination, Dr. M. found that the right thigh was flexed upon the pelvis and the right leg upon the thigh, and that the whole limb was strongly adducted. An attempt to alter its position gave rise to great pain, and further examination led to the detection of a fluctuating swelling behind the great trochanter. This was afterwards lanced, when a large quantity of thick, cream-like pus was evacuated. The child died in a very short time, of convulsions. A post-mortem examination showed that the head of the femur was dislocated on the sacrum, that the ligamentum teres and the capsule of the joint were destroyed, and that the surrounding muscles, aponeuroses, and even the subcutaneous cellular tissue were saturated with a sero-purulent fluid. No history of injury to the part could be obtained, and Dr. M., while admitting as possible that the disease may have been congenital, is inclined to think that it was developed after birth, in consequence of the very scrofulous diathesis of the child.

HYDROPHOBIA FOLLOWING THE BITE OF A CAT.—Dr. Brumwell reports in the *British Medical Journal* for October 14, 1871, a fatal case of hydrophobia. The patient, a clergyman, aged 32, was bitten in the hand by a cat, which was believed to be mad, on May 14, 1871. On August 10, symptoms of the disease developed themselves, and on the fourth day of the attack death occurred. The symptoms did not differ from those usually presented by hydrophobic patients. There was good reason to believe that the cat had been bitten by a mad dog a short time before she bit the patient.

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EDITORIAL.

COMPULSORY VACCINATION.

THE week ending November 25 exhibited one hundred and fifty-three deaths from smallpox, being twenty more than in the week previous, while one hundred additional cases were reported on Saturday of the previous week. There has, moreover, been a constant increase in the weekly mortality since the late irruption of the malady.

We take it for granted that no one capable of judging upon the ordinary events of every-day life denies the generally protective power of vaccination, even though he may be compelled to admit the occasional occurrence of varioloid much earlier after vaccination than was formerly supposed possible. This is, of course, equivalent to saying, what we believe to be the case, that even those opposed to vaccination generally admit the vaccine disease to be for a variable length of time effectually protective, basing their objection to it on different grounds.

The experience of the past weeks has shown every physician engaged in actual practice, that not only has there been a large number of individuals in our community who have never been vaccinated, but that many still remain unvaccinated, while there is an almost incalculable number who have not been revaccinated.

Feeling certain that many of the deaths which have been recorded during this epidemic of smallpox would never have occurred had vaccination been more invariably practised, and feeling, also, satisfied that the majority of medical men share in our belief that the epidemic itself would probably never have broken out had revaccination been more general among us, we have felt justified in raising our voice against what we believe a most unfortunate condition of affairs,—a condition involved in the fact that not only have people been generally indifferent about revaccination, but that there are among us, in addition to many ignorant, quite as many intelligent persons who positively refuse to have themselves vaccinated or allow the operation to be performed upon their children. We are sorry to have to include among those who are opposed to vaccination persons of intelligence; for, unfortunately, intelligence does not always bring broad and liberal views; and, although it is one of the means to the latter end, it is by no means identical with it. But, while we

have personal knowledge of those who claim to be intelligent entertaining objection to vaccination, in no instance do they include those in a community who are characterized by a thoroughly catholic culture, and whose opinions on all subjects are sought and respected.

We have already said that such objection is not based upon a want of confidence in the protective power of vaccination, but rather upon the belief that incurable diseases are capable of being thus transmitted. But is it not singular that those who should take this ground of objection are they who know least about the subject, intelligent though they may be in other matters, while scientific gentlemen who have made it their business to investigate these matters, deny that there is any practical possibility of disease being thus communicated? Certainly these intelligent persons would justly laugh at the medical man who would declare with regard to the subjects of their trade or art that they are defective or useless for the purposes for which they are intended, or capable of doing actual harm, on the ground that he knows more about the trade or art than the one engaged in it. All must acknowledge that such physician would stultify himself and deserve the ridicule which he would naturally incur. And yet the parallel is identical, except that the results are more unfortunate in the former case. Individuals are professing notions (they are not worthy to be called opinions) with regard to matters of which they know nothing,—notions which, if carried out, lead to sickness and death among innocent members of a community. And should such community be allowed no protection? On the other hand, are they not as much entitled to protection against such dire misfortune as can only accrue from smallpox as against the lawless acts of the madman? We do not assert that such notions are criminal, any more than is the hallucination of the maniac who destroys the life of his best friend, and who in doing so seriously believes that he is doing his duty. Yet the opponent of vaccination would justly cry out against the deficiency of the law which would allow such maniac to walk at large. Yet how many more lives have been lost in the past month from disregard of vaccination than would suffer at the hands of all the madmen of the nation let loose for a much longer time!

It is upon grounds like these that we approve of compulsory vaccination, and that we consider our laws defective so long as they do not thus afford us the desired security. For similar reasons, if those whose opportunities qualify them to decide deem it proper that revaccination should be compulsory, it too should be required by legal enactment.

Although we deem these reasons sufficient, it may be worth while—not, of course, for medical readers, but for such non-professional persons as may see these pages—briefly to state what have been the results of the most careful investigations in the direction of vaccination and revaccination.

In the first place, it has been positively proven that scrofula, the great bugbear of the people,—an affection quite undetermined as to its real nature, but which is

after all by no means so serious a malady as is supposed by many,—*cannot* be conveyed by vaccination; so, also, of cancer and the various non-specific cutaneous diseases. And as regards syphilis, which is really the only disease popularly associated with vaccination which is at all worthy the apprehension in which it is held, it has been conclusively determined that except the blood of an individual suffering with this affection is introduced into the arm of another, and that in very large quantity, or a scab of a syphilitic sore is used by mistake for one of vaccine, the inoculation of this disease too is impossible. Many, indeed, doubt the authenticity of any of the cases of venereal disease reported as thus arising; but, even supposing its origin possible in the manner stated, the chances, with the greatest indifference on the part of the vaccinator, are very much less than that the infant shall be poisoned by its own mother's milk; and when the precautions are taken which are observed by every family physician in selecting his virus, the communication of syphilis becomes practically impossible, while the protection against a most loathsome and fatal disease is so ample that those who have been recently revaccinated may, as a rule, expose themselves to it with impunity.

The preference, not unreasonable, which is entertained by some for virus which claims to have come direct from the cow, is shown by experience to be unfounded. For, in the first place, it is by no means so likely to succeed; and, in the second, being supplied as an article of commerce, and not by the conscientious selection of the family physician from healthy children whom he has perhaps himself attended at their birth and afterwards vaccinated, the chances are infinitely greater in favor of its being carelessly secured and insufficiently preserved. As regards success with it, we are personally cognizant of the vaccination of nearly a hundred cases from the matter contained in three sealed tubes, in which every attempt was unsuccessful. Moreover, the most extended experimentation in England during the past summer has resulted in the conclusion that the greatest amount of success in vaccination has been obtained by the use of virus which has passed through two or three individuals of the human species.

We have taken care that the statements we have made are strictly true; and we think them quite sufficient to justify such legal measures as will secure, not only primary vaccination, but also revaccination once between the ages of fourteen and twenty-one. To those who wish further to secure the most efficient protection, we should recommend a repetition of the operation whenever an epidemic of smallpox may prevail.

To those who are so thoughtless as to say—as we know to have been said by individuals professing respectability—that “of course doctors are in favor of vaccination, because they reap a harvest in consequence,” we have no answer to make, except that vaccination is not necessarily attended by expense,—public vaccinators being appointed to vaccinate those who desire it free of cost.

THE RIGHT TO REPORT CASES.

THE November number of the *Pacific Medical and Surgical Journal* contains a brief reference to a suit for libel recently brought by a Mrs. Emma Parkinson against Dr. John Scott, of San Francisco. A few months before, her husband sued Dr. Scott for malpractice, of which he alleged his wife had been the victim at the California Woman's Hospital, laying his damages at \$20,000. When the case came up, although the defendant was ready and anxious for a trial, the plaintiff did not appear, and it was therefore dismissed, for want of prosecution, at the cost of the plaintiff. Dr. Scott then published a history of the case in the February number of the journal already referred to, in which the patient is alluded to by name, the fact that she was laboring under constitutional syphilis being mentioned. Subsequently to the publication of this communication the suit for libel was instituted, the alleged libel being contained in the expression “*constitutional syphilis.*” The trial came off in October, the damages being again estimated at \$20,000. Dr. Scott claimed, and we think justly, that having been arraigned before the public for malpractice, and refused the opportunity to justify himself by trial, it was his right to make his defence through the press, and that an intelligent statement of the case of his patient required the disease to be mentioned, in order to show cause for the treatment that was adopted. The prosecution denied this right, and sued for defamation of character. On the trial, medical testimony was adduced to prove the existence of constitutional syphilis. It was also maintained that constitutional syphilis did not necessarily imply moral impurity, as the disease might have been inherited, or contracted by accident or without criminal intercourse. These points being established by the defence, the counsel for the prosecution, it is said, virtually abandoned the suit, and the jury returned, without delay, a verdict favorable to the defendant. We may add that Dr. Scott was prepared to prove at the first trial, by the testimony of his colleagues and of other distinguished physicians of San Francisco, that his treatment of his patient had been eminently judicious and proper.

The editors of the *Journal* say, “The business of suing for malpractice and for libel has not hitherto been very successful in California. We do not call to mind a single instance of the conviction of a regular practitioner for malpractice, though a number of suits have been instituted at different times during the last fifteen or twenty years.” Suits for malpractice in this city have generally, also, been unsuccessful, and have often subjected the plaintiffs to a good deal of expense; but our California friends will find, as we have found, that so long as there are unprincipled attorneys, such suits will continue to be instituted, whenever there is a prospect of a fee.

While expressing our most unqualified approval of the course taken by Dr. Scott to vindicate himself from the charge of malpractice, it does seem to us that the history of a patient should, as a general rule, be so

given that it will not be possible for the reader to recognize the individual referred to. The name of the patient adds nothing to the scientific interest of the case, and may, in many instances, rouse impertinent curiosity in those into whose hands the journal in which it is reported may fall; and it is to be recollected that among the readers of a medical periodical may be some who are not physicians. We have, therefore, adopted the invariable rule of giving only the initials of a patient's name; and if from any cause this would be sufficient to lead to his discovery, we would be disposed to omit them. With these precautions we think that there can be no question that every physician has a perfect right to report in the medical press any case which will be either interesting or instructive to the profession.

REFERENCES TO JOURNALS.

WE feel certain that we are giving expression to the feelings of a large majority of readers of medical periodicals when we venture to condemn the constant practice of omitting the dates of issues of journals from which extracts are made in the departments for abstracts or selected articles. It is, no doubt, sufficient acknowledgment of the journal whose matter is thus used that its name be given; but for the *convenience of the reader*, and the *value of the journal* thus appropriating, there should also be added the *date* of the issue from which the abstract is made. This in the majority of instances is quite possible, and we are certain that the additional value which would attach to the journal quoting would amply compensate for the slight additional trouble involved in thus completing the reference.

It has been our own custom thus to include in references the dates of issue of the journal from which an abstract is made, as well as to give, when possible, the dates of intermediate journals when the selection is not made directly from the journal in which it first appeared; but the omission of such date by an intermediate journal often makes it impossible to secure entire completeness in this respect.

LEADING ARTICLES.

MORE LIGHT NEEDED.

WE are pained, although not surprised, to read such humiliating paragraphs as the following, which has been going the rounds of the press lately, founded on the evidence offered in a recent poisoning case in the Far West:

"A lawyer, not in the case, who heard the medical testimony, remarked that another such trial would ruin the medical fraternity of Kansas. It is a subject of general comment that the doctors contradicted each other upon nearly every point on which they were questioned. They even differed in regard to the effect of that well-known drug, quinine, which is taken by everybody in Kansas. One

learned doctor hesitated a long time before he would say that congestion of the lungs was a common cause of death. When they took hold of those poisonous drugs, morphine and atropine, every one had a different idea about them."

It seems to be inconsistent with the advanced state of medical education of the present day, that an exposition of the principles of medical jurisprudence is not considered absolutely essential to the completeness of a course of medical instruction. The average practitioner, being left to his own resources, which may be limited, and to his own experience, which may be insignificant, picks up enough scattered material to be available when he is placed under the high pressure of the witness-box; but he has always accustomed himself to regard even a moderate knowledge of forensic medicine as an accomplishment to be called into requisition only in an emergency, for which he can prepare himself at a few hours' notice. Although medical jurisprudence must have been as old as medicine or law itself, and although the courts have teemed with cases that have puzzled and interested the representatives of both professions, the lamentable truth still remains that the physician of the present day is in a perpetual state of unpreparedness—if we may use such a term—for the vital questions of the court-room; and this, too, in spite of the fact that every important topic connected with medical science that can require elucidation from the medical witness is embraced in the study of medical jurisprudence.

A proper distinction is not made in the court-room between the testimony of a well-informed medical man, who, though thoroughly competent to give intelligible facts and opinions, may be confused by the persistent efforts of a browbeating attorney, and of an ignorant medical pretender, who, while enveloping his evidence with technicalities,—often altogether misapplied,—trusts to the want of information of the court and counsel on the subject under examination to carry him through without detection. It must be an unsatisfactory state of affairs when the life of the accused hangs on the slender thread of medical evidence elicited by a wholly ignorant member of the bar from an only partially-prepared practitioner of medicine. Such contingencies must of course be rare at the present day, and we should be sorry if we ever had to record such perplexing scenes as some years since occurred in Virginia, in a case of presumed infanticide, founded on the finding of certain bones, but whether they were really those of a human foetus or a pig, neither court, counsel, nor medical witnesses could decide. And yet these are the very cases in which the proverbial disagreement among doctors occurs in judicial investigations almost every day, the world over. It seems as if it was a difficult matter to get an agreement in more than mere facts from a number of medical witnesses examined in the same case: the moment an opinion is asked for, the widest dissimilarity of views is expressed, and the most fanciful theories are given utterance to. A witness may also trip, and then the ever-

ready legal tantalizer takes an active part in the further invalidation of the medical testimony. The greater his powers of dissection,—a genuine process of inquiry to the tortured physician,—the higher becomes his reputation with his professional brethren and with the public.

The trial of Palmer in England several years since for poisoning was, unfortunately, memorable as much for the diversity of opinions expressed, and for the contrariety of the testimony on many salient points of toxicology, as it was for the ability and attainments of the learned witnesses. It would be unfair to say of such men that a want of information lay at the bottom of all this unsatisfactory testimony; it was rather a lack of accurate observation of the actions of poisons, and too great confidence in their own views of their properties and effects. Such is not, however, the case in the great mass of these judicial inquiries. The glaring fault to be corrected in this country, at least, is the want of a more thorough system of instruction during student-life in the principles of forensic medicine. Until medical jurisprudence is taught less as a mere incidental subject—tacked on here and there to chemistry and materia medica in places where it seems to fit—and more as a branch worthy of separate and special study, the average medical man, trusting to his own experience, may go on successively blundering, and laying up the results of his blunders for his own guidance, so that even at the end of a long life his stock of real knowledge will be so extremely limited that it will neither benefit himself nor the world at large, if the occasion should arise to give it publicity. The case is very different when the practitioner, receiving the groundwork of his information on forensic medicine from the lips of those who are competent to impart it, continues afterwards to store up for future reference the recorded experience of others, so that when needed it may be rendered available.

R. J. D.

CORRESPONDENCE.

TO THE EDITORS OF THE PHILADELPHIA MEDICAL TIMES.

MESSRS. EDITORS,—The *American Journal of the Medical Sciences* for October contains a review of an article "On Amputations at the Ankle-Joint in Military Surgery," contributed by me to the *Surgical Memoirs* of the U. S. Sanitary Commission, in which occurs the following criticism:

"Comparing the mortality of ankle-joint with that of leg amputations, Dr. Smith finds that in the United States army, during the War of the Rebellion, the death-rates of the operations in question were respectively 13.43 and 26.02 per cent., while in the Confederate service the death-rates were 20 and 27 per cent., and in the British army, during the Crimean war, 18 and 36 per cent. 'From these statistics,' Dr. Smith adds, 'it appears that amputation of [at in the original] the ankle-joint is 50 per cent. less fatal than the alternative amputation through the leg.' We cannot commend the accuracy of this calculation, which, indeed, we are a little surprised to find in the work of a writer who is as much accustomed to statistical investigations as is Dr. Smith. Eighteen per cent.

is, indeed, half of, but by no means 50 per cent. less than, 36 per cent.; and the difference in death-rates is obviously *not* 50 per cent., but 12.6, 18, or 7 per cent., according to the figures derived from the different sources mentioned."

The statement in the text was to the effect that the death-rate in ankle-joint and leg amputations in the United States and British armies was in the ratio of one of the former to two of the latter. The "accuracy of this calculation," based on these statistics, that ankle-joint amputations were 50 per cent. less fatal than leg amputations, and also the accuracy of the reviewer's calculation, that "18 per cent. is, indeed, half of, but by no means 50 per cent. less than, 36 per cent.," I am quite willing to leave to the decision of the reader.

On looking over recently the very valuable "Report on Amputations at the Hip-Joint," by Assistant-Surgeon Otis, issued as Circular No. 7 from the Surgeon-General's Office, I find the following allusion to S. Cooper's case in a note on page 12: "Dr. Stephen Smith (*New York Journal of Medicine*, vol. ix. p. 204) rather unreasonably excludes Cooper's case from his statistics, because the patient died before the operation was completed." The case was excluded from my tables because it was not an amputation at the hip-joint; that operation was *not* performed, before or after death, so far as the record shows. The case is thus recorded by Cooper in his "Surgical Dictionary:"

"In one dreadful case of fracture of the upper part of the femur by a grape-shot, where the operation had been delayed too long, the whole limb being inundated with matter, and the upper end of the lower portion of the bone projecting through the flesh backwards, I ventured to perform the same operation (Abernethy's method of amputation at the hip-joint) at Oudenbosch in Holland, a few days after the assault on Bergen-op-Zoom; and here happened what must often occur. Immediately the soft parts had been divided, as the bone was broken to pieces, the limb came off, leaving the head of the bone, the trochanters, and a small piece below them projecting. Had not the man appeared in a very bad way by the time the vessels had been secured, I should now have removed the head of the bone; but the shock of the operation was such that he survived it but a few minutes, though scarcely any blood was lost."

That Dr. Otis does not himself regard this case as an amputation at the hip-joint, though he has tabulated it among "Intermediate Amputations at the Hip-Joint," is proved by his remark in the table that "the exarticulation was not completed." It is surprising that he should have admitted this case of amputation in the upper part of the thigh in tables of amputation at the hip-joint, and thus vitiate his conclusions, while he rejects a successful amputation at the hip-joint, vouched for by a committee of the American Medical Association (the case of Drs. Richards and Claggett).

Truly yours,

STEPHEN SMITH.

NEW YORK, November 16, 1871.

TO THE EDITORS OF THE PHILADELPHIA MEDICAL TIMES.

MESSRS. EDITORS,—Having had a case of urethral stricture, with accompanying urinary fistule, recently fall into my hands, I operated upon the patient, *secundum artem*, by external urethrotomy upon a Syme's staff, and immediately afterwards passed a No. 14 steel sound into the bladder. The fistule were next slit up, and the patient left in good condition. Four days afterwards I attempted to use the same sound again, but failed utterly, on account of the exquisite tenderness of the ante-scrotal portion of the urethra. To what

this tenderness was due I am still unable to say. The following day I chloroformed the patient, and Dr. Washburn passed the sound without the slightest difficulty.

In a few hours I was summoned in haste, and found the patient suffering from well-marked urethral fever, consequent on the use of the instrument. As pain simulating the "pleuritic stitch" was a prominent symptom, I gave him hypodermically half a grain of sulphate of morphia, which soon brought relief from the pain, leaving a host of less pressing troubles to be met by milder means. In a day he was safely through the difficulty, and had an interim of rest until the sound was again passed. It, however, brought with it a return of all the former suffering, which was so intense as almost to make me resolve to relinquish its use at the risk of a return of the stricture. Liberal doses of quinine and morphia brought relief in a few hours, but left severe after-troubles,—due to the morphia in great part.

Nervous shock was evidently the cause of all this distress. Part of the resulting evils of the solid steel were purely hysterical, but part were also of more serious import; but both trains of phenomena indicated, I thought, a free use of bromide of potassium. Accordingly I administered it in thirty-grain doses after each subsequent passage of the instrument, and on but one occasion did the urethral fever supervene. This once the sickness of stomach induced by the anæsthetic caused a rejection of the medicine, and then the fever was not less severe than before I began its use. If the bromide has been used for a similar purpose before, I am not aware of it, I regret to say. Its marked good results in my hands induce me to ask for it a trial in like cases, which any large hospital so frequently furnishes.

J. T. ROTHROCK, M.D.

WILKESBARRE, PA., October 23, 1871.

REVIEWS AND BOOK NOTICES.

A PRACTICAL TREATISE ON FRACTURES AND DISLOCATIONS. By FRANK HASTINGS HAMILTON, A.M., M.D., LL.D., Professor of the Practice of Surgery with Operations, in Bellevue Hospital Medical College, etc. Fourth Edition, Revised and Improved. Illustrated with three hundred and twenty-two Wood-Cuts. 8vo, pp. xxiv., 789. Philadelphia, Henry C. Lea, 1871.

We know of nothing which gives more promise for the future scientific attainments of the medical profession in America than the increasing demand for monographs like that of Dr. Hamilton. In twelve years three editions of the book have been exhausted, and the fourth is now before us. Most of our valuable monographs come from abroad; but that we do not lack at home authors capable of exhaustively treating a practical subject, the work before us is satisfactory evidence.

Of a book so well known it is superfluous to attempt an extended analysis, and we shall only aim to lay before the readers of the *Times* a few points which have struck us as we read the volume, and notice some items wherein this differs from preceding editions. Since its first issue some thirty-two pages and thirty-three wood-cuts have been added to it,—sixteen of the latter being taken from Dr. Bigelow's valuable essay on the Hip.

On page 37, Prof. Hamilton says he has seen tetanus follow the rough handling of a fracture, which would be in no way a remarkable event, even without the roughness so properly reprobated. Prof. Lister's carbolic-acid method is referred to when speaking of the treatment of compound fractures, and the mode of application is afterwards pretty fully described, but the author does not commit himself to

any positive opinion as to its value. For ununited fracture, Brainard's method of treatment is advised, and our author, after describing a drill of his own invention, with commendable candor admits that the one introduced by Dr. Brainard is the better instrument. The chapter upon the repair of bone is not at all up in its details, the reader being referred to works upon surgical pathology for any information he may seek upon the subject. This we regard as a mistake, for a succinct notice of the work done by the microscopists in this direction would not have occupied much space, and would have materially added to the value of the volume. We cannot agree with Dr. Hamilton when he condemns the use of adhesive plaster in fractures of the ribs; for, though the strips may be somewhat loosened by the respiratory movements, we have always found them most valuable adjuvants to the bandage. While upon fractures of the forearm, the writer refers to several cases in which he has observed gangrene to occur after the fractures had been dressed at dispensaries and the patients had failed to return at the proper time. It has always seemed strange to us that persons suffering from fractures should ever be treated as out-patients, for the results are permanently recognizable, and a large portion of the suits for malpractice have been for deformity following fractures. We ourselves feel as much anxiety about the treatment of fractures falling under our care as we experience in any other class of surgical cases, always insisting upon a careful supervision of their progress to recovery; and we would most emphatically indorse the opinion expressed, by Prof. Hamilton, that fractures of the forearm especially, should be seen by the surgeon at least once in the twenty-four hours, for the first ten or twelve days.

The second part of the book consists of an exhaustive treatise upon dislocations. Prof. Bigelow's views upon luxations of the hip-joint are treated with due consideration, and most of his illustrations of the Y ligament are reproduced.

In conclusion, we would say that Dr. Hamilton's style is decided without being dogmatic, and lucid in an eminent degree, and that the book is one which we should suppose would be found upon the shelves of every American practitioner of surgery.

TRANSACTIONS OF THE MINNESOTA STATE MEDICAL SOCIETY. Pamphlet, 8vo, pp. 63. St. Paul, Pioneer Printing Company, 1871.

The third annual meeting of this society was held at St. Paul, February 7 and 8, 1871. Its numbers at present one hundred and twenty-eight members.

The opening address was delivered by the President, Dr. Samuel Willey. The members contributed eleven papers on various subjects: a short notice of each is appended.

1. A report of a case of ovarian tumor cured by spontaneous rupture into the vagina.

2. Report of the case of Dr. E. E. Braun. Dr. B. noticed a small tumor on the internal surface of the thigh in April, 1866. It enlarged, and, from distention, the skin ruptured and became ulcerated in July, 1870. Pain had been severe, after the first year, in the tumor and down the leg into the foot. Death resulted from exhaustion in October, 1870. The tumor was "fatty," and weighed fifty-eight pounds.

3. Medullary cancer, involving both testes. The right testicle was found in the right iliac fossa, and weighed three and a half pounds; the left weighed six pounds. It was found lying upon the vertebral column, and extended from the sacrum to the diaphragm. Adhesions had formed to all the surrounding tissues. The symptoms of disease had lasted two years and eight months.

4. Tubal pregnancy; an interesting case, in which the tumor—which was at first lateral—became central at the fourth month, all pain, which had been very severe up to that time, ceasing. The distended Fallopian tube remained until parturition, which occurred at full term; but after an excessive discharge of liquor amnii, after the escape of the fœtus, it disappeared.

5. Successful application of manipulation for reduction of a dislocated femur.

6. The annual essay, by S. D. Flagg, M.D., on Post-Natal Atelectasis, is a brief, well-written compilation.

7. An interesting case of elephantiasis tuberculorum, com-

plicated with the anæsthetic form, with a translation of an article by Drs. Boeck and Danielsen on that subject.

8. Interesting case of glanders in the human subject which recovered under the use of carbolic acid internally.

9. Report of the committee on local statistics of surgical diseases and the use of anæsthetics. It closes with the carefully-reported histories of three cases of hip-disease at different stages of the disorder, showing two perfectly satisfactory recoveries and one death.

10. An investigation into two cases of death from the use of the fresh root of *cicuta maculata*.

11. Report of the committee on practical medicine: an account of an epidemic of malarial typhoid fever.

BOOKS AND PAMPHLETS RECEIVED.

A Text-Book of Pathological Histology: An Introduction to the Study of Pathological Anatomy. By Dr. Edward Rindfleisch, O.Ö. Professor of Pathological Anatomy in Bonn. Translated from the Second German Edition, with permission of the Author, by William C. Kroman, M.D., assisted by F. T. Miles, Professor of Anatomy, University of Maryland. With two hundred and eight Illustrations. 8vo, pp. 695. Philadelphia, Lindsay & Blakiston, 1872.

The Relation of Epilepsy to Insanity and Jurisprudence. By W. J. Conklin, M.D., Assistant-Physician of Southern Ohio Lunatic Asylum. Pamphlet, pp. 43.

The Prevention of Abscesses in Hypodermic Medication, with the Description of an Instrument for the Injection of Strychnia. Pamphlet. By Reuben A. Vance, M.D. Reprinted from the *Medical World*, October, 1871.

The Science and Practice of Surgery. Illustrated by four hundred and seventy Wood Engravings. By Frederick James Gant, F.R.C.S., Surgeon to the Royal Free Hospital. 8vo, pp. xlv., 1265. Philadelphia, Lindsay & Blakiston, 1871.

An Introduction to Pathology and Morbid Anatomy. By T. Henry Green, M.D., London, Lecturer on Pathology and Morbid Anatomy at Charing-Cross Hospital Medical School. Illustrated by numerous Engravings on Wood. 8vo, pp. 260. Philadelphia, Henry C. Lea, 1871.

A Treatise on Human Physiology, designed for the Use of Students and Practitioners of Medicine. By John C. Dalton, M.D., Professor of Physiology and Hygiene in the College of Physicians and Surgeons, New York, etc. Fifth Edition, Revised and Enlarged, with two hundred and eighty-four Illustrations. 8vo, pp. 728. Philadelphia, H. C. Lea, 1871.

The Principles of Psychology. Part II.—The Inductions of Psychology. By Herbert Spencer. Pamphlet, pp. 288. New York, D. Appleton & Co., 1870.

Remarks upon the Diagnosis of Ovarian Tumors from Fibro-Cystic Tumors of the Uterus. By Charles C. Lee, M.D., Surgeon to the Charity Hospital. Reprinted from the *New York Medical Journal*.

Hand-Book of Skin-Diseases. By Isidor Neumann, Docent an der k. k. Universität in Wien. Translated from the Second German Edition, with Notes, by Lucius D. Bulkley, A.M., M.D., Surgeon to the New York Dispensary, Department of Venereal and Skin Diseases. Illustrated with sixty-six Wood-cuts. 8vo, pp. xiv., 467. New York, D. Appleton & Co., 1871.

Medical Communications of the Massachusetts Medical Society. Vol. XI., No. 5, 1871. Second Series, Vol. VII., Part V. Pamphlet.

Physical Effects of Compressed Air, and of the Causes of Pathological Symptoms produced on Man by Increased Atmospheric Pressure employed for the Sinking of Piers in

the Construction of the Illinois and St. Louis Bridge over the Mississippi River at St. Louis, Mo. By A. Jaminet, M.D. Pamphlet. St. Louis, R. & T. A. Ennis, 1871.

Fecundity, Fertility, and Sterility, and Allied Topics. By J. Matthews Duncan, A.M., M.D., L.R.C.S.E., F.R.C.P.E., F.R.S.E., etc. Second Edition, Revised and Enlarged. 8vo, pp. xvi., 483. New York, William Wood & Co., 1871.

Circular No. 3, War Department, Surgeon-General's Office, Washington. A Report of Surgical Cases in the Army of the United States from 1865 to 1871. Quarto, pp. 296. Washington, Government Printing-Office, 1871.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY, OCTOBER 26, 1871.

THE PRESIDENT, DR. J. H. HUTCHINSON, in the chair.

DR. WILLIAM PEPPER presented a specimen of *papillary tumor of the larynx*. The case from which the specimen was obtained forms the basis of two clinical lectures in Nos. 28 and 29 of this journal.

The tumor sprang from the vocal cords, and almost entirely occluded the glottis. The patient was a little girl, aged 3½ years. The symptoms of obstructed breathing first made their appearance after an attack of measles, and steadily developed until death occurred, from dyspnoea and asthenia, within five months from the beginning of the disease.

Dr. F. F. MAURY said that the case just reported by Dr. Pepper reminded him of a somewhat similar one which occurred in his practice. The growth was attached to the body of the larynx by a broad surface. It was decided not to operate, and, when last heard from, the patient was still living and the dyspnoea somewhat abated.

Dr. JOHN H. PACKARD stated that he reported, in 1862, to the society two cases of peculiar growth, which he believed to be probably of analogous character, found in the base of the bladder also after an attack of measles.

Dr. MAURY observed that he had seen such growths in the bladder independently of measles.

Dr. PACKARD exhibited a specimen of *obstructed bowel*, the symptoms of which simulated the strangulation of a co-existent scrotal hernia of large size.

Dr. JOHN ASHHURST, JR., recalled two similar cases of hernia connected with internal strangulation of the intestine by bands of adhesion, one, relieved by operation, reported by Mr. Bryant, of Guy's Hospital, and the other, which occurred at the Pennsylvania Hospital, reported by Dr. T. H. Andrews in the Proceedings of this Society.

Dr. Ashhurst referred to a plan of treatment,—inapplicable, however, in this case, owing to impending rupture of the bowel,—namely, puncturing the intestine to relieve its distention, and thus facilitate reduction,—an operation which had been performed by Mr. Tatum and by several German surgeons.

In reply to a question by Dr. Brinton, Dr. A. said that Mr. Tatum's operation was done in a case of hernia, but that Mr. T. Smith had punctured the bowel through the linea alba, as a euthanasial measure, in a case of rupture of the intestine without external wound. A similar proceeding is recommended by Prof. Gross in certain cases of intestinal obstruction.

Dr. H. ALLEN referred to the early appearance of the stercoraceous vomiting as an indication that the obstruction had been high up in the small intestine. The number of *valvule conniventes* about the site of the constriction appears to confirm this. He invited attention to the seat of localized pain as a symptom of value in similar cases, instancing Mr. Habershon's interesting observations on the subject in the Guy's Hospital Reports, 1870-71.

GLEANINGS FROM OUR EXCHANGES.

CHLORAL.—In a note presented by M. Robin to the Académie des Sciences (*Bulletin Gén. de Thérapeutique*, September 15), M. Byasson says that the results of his investigations lead him to believe that the action of the hydrate of chloral differs from that of chloroform, and that it may be considered as the resultant of that of two products into which chloral resolves itself when in contact with the blood,—chloroform and formic acid. The action of chloral on the human organism is different from that of trichloroacetic acid and the trichloroacetate of soda, which resolve themselves into chloroform and acetic acid, but is analogous to it.

A part of the chloroform, formed by the action of the alkaline carbonates in the blood on the hydrate of chloral, is eliminated by the lungs, and a part of the formic acid is excreted by the kidneys under the form of formate of soda.

The action of chloral may be stated to be practically as follows: First degree, a slight soporific and sedative action upon the nervous system of sensation, which may be accompanied by periods of restlessness resembling those produced by dreams. Second degree, a decided soporific action, with diminution of the sensibility, corresponding to a calm sleep of variable duration, but without apparent derangement of the principal functions of life. This sleep may be prolonged during a very long period of time by the administration of successive doses of this medicine. Third degree, an anæsthetic action, with complete loss of sensibility and relaxation of the muscles,—a condition which generally terminates in death, simply because it is impossible for the organism to eliminate with sufficient rapidity the products of the remedy.

THE BILE-ACIDS IN JAUNDICE.—Dr. E. A. Golowin, in a carefully-prepared paper in *Virchow's Archives*, September 18, states it as his belief that a permanent retention of the bile causes such alterations in the liver as to interfere with the secretion of the bile-acids. The fact that the gall-bladder occasionally contains a dark thick fluid holding the bile-acids in solution cannot be used as an argument against this view, as this may have been secreted at a time when the liver was still forming the bile-acids, and have been retained in the gall-bladder for some time.

EFFECT OF CARBOLIC ACID AND ELECTRICITY ON SPERMATIZOIDS.—Prof. James T. Whittaker, in some recent experiments upon reproduction (*The Clinic*, October 21, 1871), has shown that carbolic acid in full strength not only kills spermatozooids, but destroys them, leaving under the microscope but a mass of transparent globules of irregular (polygonal) outline and various size,—masses of complete and permanent coagulation. The acid rapidly advances in an irregular wall, beading, separating, and destroying the zoosperm within its limits in a few seconds. The extra-mural filaments remain motionless as at once arrested, until more acid be added, when they too disappear. In even a weak solution with glycerine it will speedily arrest motion. The vapor of the acid has a similar effect.

If electricity in the interrupted current be sent through a drop of semen, the spermatozooids are speedily killed by shock. If the constant current be used, only those at the positive pole are destroyed. This is from the development of acid at this pole. If the current be constantly changed by continually reversing the poles, the development of acid is apparently prevented, and the spermatozoid is made to experience the stimulus simulating vitality. Their motions are increased and prolonged. Moreover, motion is resumed for a short time in those recently quiet.

If carbolic acid, however, be previously brought into contact with the drop, the electric current has no effect. As stated by Burdon-Sanderson, "There is no movement,—it is death."

MORBID GROWTHS OF MIXED NATURE.—Dr. J. Collins Warren, in a paper read before the Boston Society of Medical Sciences (*Boston Medical and Surgical Journal*, October 19, 1871), reported two cases which exhibited the peculiarities of adenoma and carcinoma combined to such an extent as to

have made it difficult to decide to which class of growths they belong.

One was a case of naso-pharyngeal polypus in a young man æt. 26. He was twice operated upon at the Massachusetts General Hospital, and Dr. Warren's observations are based upon the growth removed at the second operation. The tumor filled the whole naso-pharyngeal cavity, pressing the soft palate downwards, projecting through an opening in the left side of the nose and partly covering the left eye, which was dislocated by pressure. After removal, the masses were nodulated, and appeared like soft jelly. In thin section the tumor was shown to be made up of a fibrous stroma surrounding alveoli, many of which were lined with cylinder epithelium and distended with gelatinous substance. At the surface the epithelium had a tubular arrangement, presenting the appearance of follicles opening into the nasal cavity. The appearance of the growth in section was somewhat that of colloid cancer; but the absence of any mucous degeneration of the stroma and the character and arrangement of the cells precluded this form of disease.

Again, the growth resembled glandular tissue, and the presence of gelatinous or mucous material could be accounted for by supposing it an accumulation of retained glandular secretion; but the departure from the normal gland type was too great, and the irregularity of the formation, the rapid growth, and the destructive character of the polyp present peculiarities found only in a more malignant type of new formation.

The points of interest illustrated by this specimen are stated to be these:

1. The occasional occurrence among naso-pharyngeal polypi of a variety which, though resembling others to the naked eye, differ microscopically and clinically, and are found to be malignant in nature.

2. This tumor is the only form of cancer which we find occurring primarily in the nasal cavity and the antrum.

3. This is a sample of carcinoma only locally malignant, and is never followed by deposits in the neighboring glands or in distant organs.

4. The presence of large masses of mucus in acini, obliterating largely their epithelial lining, and thus masking their original anatomical character.

The second case reported was that of a tumor near the right parotid gland in a man aged 50. When removed, it was as large as a goose-egg, soft and cephaloid in appearance, and surrounded by a fibrous capsule. Microscopically it was found to consist chiefly of polygonal gland-like epithelium, with a tendency to arrangement similar to that of the neighboring parotid,—that is, they were inclosed in acini surrounding a central cavity, and supported by a stroma which towards the centre was scanty, but was more abundant at the periphery. The cells and cavity of the acinus were both larger than in the normal gland. The capsule was infiltrated by cylindrical masses of these cells, which ramified in a manner frequently observed in certain kinds of cancer. Thus there was a tendency in the new growth to imitate the adjoining gland, both in character and the arrangement of its cells, while at other points was a departure from the normal gland type,—indeed, appearances which suggested a more malignant form of disease than simple adenoma.

That the disease was originally benign in character, appeared from the clinical history.

Dr. W. found nowhere a minute description of a form of tumor similar to the one described.

TRANSMISSION OF SYPHILIS TO THE THIRD GENERATION.

—M. Coates (*Lancet*, October 21), in the course of an address to the members of the Salisbury Medical Society, said, "Many years ago a postboy came under the care of my father for primary syphilis. He infected his wife. She had primary, afterwards secondary, and finally tertiary symptoms; carried a large cicatrix on her forehead—the result of caries—to the grave. Soon after her marriage she became pregnant, and aborted many times; at last she bore a living child,—a girl. At fourteen years of age, while at school, two syphilitic ulcers broke out on one of her legs, which, when healed, left two as characteristic ulcers as I ever saw. She married early, and had a very delicate child; the next child was born dead and putrid; the third presented, a few days after birth, character-

istic symptoms of infantile syphilis, and died." This series of cases he believes to be unique.

FUNCTION OF THE ANTERIOR PART OF THE BRAIN.—Prof. Schiff, of Florence (*London Lancet*, October 21, 1871) is said to have confirmed the announcement that the anterior portion of the brain has to do with motion; but he has found that the muscular movements do not arise from an actual motor property of the brain, but are reflex movements excited by irritation of certain parts of the cerebrum which regulate tactile sensibility (not sensitiveness to pain). The removal of such parts does not directly abolish the movements, but disturbs them indirectly through the destruction of tactile sensibility.

PUNCTURE OF THE COLON IN TYMPANITIS.—Mr. J. H. Wathen refers in the *British Medical Journal* for October 21 to six cases in which puncture of the colon was resorted to for the relief of tympanitis. In one case the distention of the bowels came on during peritonitis, and, although temporary relief was procured by the operation, the patient ultimately sank. In the second case death was due to double pneumonia. In the third and fourth cases the cause of death is not stated, but the patients lived several days after the operation. In the fifth case the patient recovered; and in the sixth case the patient recovered sufficiently to go upon a drunken spree, of the effects of which he died.

THE FUNCTIONS OF THE SPLEEN.—The study of the functions of the spleen (*Gazette Hebdomadaire*, October 3; from *Centralblatt und Allgem. Wiener Med. Zeit.*, August 8) has demonstrated the analogy of this organ to the lymphatic glands, and, consequently, the hemopoetic functions of the former are believed to be established. This explains the fact that this viscus is not essential to life, which has been demonstrated by the experiments of Malpighi and other investigators. Tiedemann and Gmelin have come to the conclusion, in consequence of their experiments, that, after the removal of the spleen the lymphatic glands supplement it in its functions. Prof. Mosler has communicated a résumé of the results obtained in thirty experiments in which the spleen was removed. These, while they confirm some of the results of previous experiments, differ from them in some of the details.

The marrow of bones appears to play an important part in hemopoiesis, and well-marked alterations, similar to those in leukæmia, are sometimes found in it after the removal of the spleen. The vicarious properties of the lymphatic glands, which seem to depend upon various external conditions, are not always completely developed in animals deprived of their spleens, for during the first few months following the operation the blood appears to be altered in its composition. We must, therefore, admit that the spleen has a special influence upon the formation of blood, and especially upon the genesis of the white and red corpuscles. The spleen seems to be without influence upon the gastric and pancreatic digestion. An abnormal increase of appetite in animals after extirpation of the spleen is not a constant occurrence.

THE BLOOD-VESSELS OF THE LUNGS IN EMPHYSEMA.—Dr. Isaaksohn, in an article on this subject (*Virchow's Archives*, September 18), says that the number of the blood-vessels which ramify on the walls of the alveoli of the lungs is much less in emphysema than in the healthy condition of these organs. Instead of having a tortuous course, as in health, the capillaries are straight, in some places interrupted, and in certain positions do not allow injections to pass readily through them. In these positions the vessel is seen to be filled with a granular, colorless mass. The pathological changes begin in the endothelium of the capillaries. When the healthy vessels are injected with a solution of nitrate of silver, dark lines and black points, which Eberth and Cohnheim regard as mouths, come into view. This is not found to be the case in vessels taken from emphysematous patients. The wall of the vessel, it is true, becomes dark, but the characteristic black lines or points are not produced. The first change observed is that the walls of the vessels become granular, and that there is a tendency to the precipitation of white blood-cells at the affected points. These corpuscles increase in number, and—partly in consequence of their presence, and partly in consequence of a deposition of a fibrinous

or granular matter upon them—the vessel is at last completely obstructed. A little later the vessel and its contents undergo fatty degeneration, and the former may disappear entirely, giving rise to an interruption in the course of the vessels. The changes in the blood-vessels are to be regarded as the primary disease; the changes in the lung-tissue itself, as secondary to it.

CARBUNCLE TREATED BY CUT CUPS.—M. Hamon (*Bulletin Générale*; from the *Revue Méd.*, June, 1870) recommends the application of cups to carbuncles after they have been freely lanced. From two to three ounces of blood should be removed in this way. He claims that the phlegmonous affection may in this way be aborted if it is done in time, and that the sloughing and profuse suppuration, which are the consequences of the modes of treatment most in vogue, are avoided by it.

ORIGIN OF WHITE SPOTS ON THE HEART'S SURFACE.—In a paper read before the Clinical Society of London (*Lancet*, October 21, 1871), Dr. Baumbler endeavored to prove that the white or milky spots frequently met with on the surface of the heart at post-mortem examinations have a clinical history of very transient acute pericarditis. He adduced in support of this proposition two cases in which an acute illness accompanied by dyspnoea, with pain behind the sternum, radiating upwards to the larynx, the left shoulder, and towards the left ear, and with slight febrile disturbance, was accompanied by a characteristic pericardial friction-sound, lasting, like the other symptoms, for only two or three days. In a third case, where the onset had been more gradual, the friction-sound was heard over a larger area, and there was also some distention of the pericardium by fluid.

CHLORAL IN CHOLERA.—M. Reichard (*L'Union Médicale*; from the *Gazette Médicale de Strasbourg*) has employed chloral in cholera to fulfil the following indications: 1. To relieve the cramps at the commencement of the disease. 2. To assuage the precordial pain at its close. 3. To arrest vomiting; and, 4. To procure sleep. He says that not only are all these results obtained, but the success of the treatment also surpassed expectation.

INUNCTION IN THE TREATMENT OF DISEASE.—The Italian physicians appear (*Journal für Kinderkrankheiten*, Heft 3 und 4) to be very fond of the use of olive-oil by inunction in the treatment of the diseases of children in which the functions of the skin are depressed. The whole body is rubbed with tepid olive-oil every twelve, six, or four hours, according to the urgency of the case. The child is afterwards wrapped in flannel. The *Gazzetta Medica Ital. Provinc. Venet.* asserts that these inunctions are much more efficacious than the warm bath, because—1. They restore more completely and permanently the functions of the skin. 2. The disadvantage of a reaction is avoided by their use, and the layer of oil protects the surface of the body from direct contact with the atmospheric air. 3. The oil prevents organic combustion, and in this way aids nutrition. 4. The inunction with oil does not produce a depressing, but, on the contrary, an exhilarating, effect. In some cases an improvement in the symptoms has been noticed twenty minutes after the operation, but generally not until from forty-eight to seventy hours.

SANTONATE OF SODA.—Dr. Theodore Krauss has found (*Journal für Kinderkrankheiten*) santonate of soda preferable to santonin as an anthelmintic.

A FEMALE CATHETER RETAINED IN THE URETHRA OF A MAN.—M. Verneuil (*Bulletin Gén. de Thérapeutique*, September 15) reports the case of a man whose urine a physician attempted to draw off by means of a female catheter. In consequence of a sudden movement on the part of the patient, the physician relaxed his hold of the catheter, which then slipped into the urethra. M. Verneuil, failing in his efforts to withdraw the instrument through the meatus, removed it by means of an incision in the perineum.

M. Maligne has stated that the length of the male urethra is from fourteen to sixteen centimetres (about five inches); but these figures are the results of his investigation on dead bodies, and M. Verneuil thinks that he has not taken sufficiently into consideration certain conditions which may be presented in disease. For instance: 1. Hypertrophy of the

prostate. 2. The semi-erection which is often met with in patients suffering from retention of urine. 3. An elevation of the bladder, which is produced by a mechanism analogous to that which causes the gravid uterus to rise higher up in the pelvis.

THE BLOOD IN CHYLURIA.—Prof. Hoppe-Seyler (*Medical Times and Gazette*, September 30, 1871; from *Med.-chem. Unters.*, 1871, p. 551) has recently been fortunate enough to obtain and analyze, simultaneously, specimens of the urine and blood of a female patient of the late Prof. Niemeyer's, suffering from chyluria, or chylous urine.

The urine had a milky-white appearance, and contained 7.2 parts per 1000 of fat. The blood yielded 41.3 per cent. of serum of a yellowish color, barely turbid, and not in the least milky. Indeed, there was perfect coagulation of the blood, and the serum was not of the same fatty nature as the urine.

The analytical results exhibit a smaller proportion of albuminoids than is usual. This, Hoppe-Seyler suggests, may be owing to loss through the urine, to dilution with lymph in consequence of the manner in which the blood was drawn (by cupping), or to both these causes. The serum contained a high percentage of fat, while the corpuscles did not appear to contain fat in larger proportion than normal corpuscles; nor were the red blood-corpuscles and the coloring-matter of the blood (hæmoglobin) diminished. Since the whole blood contained 1.7 per 1000 fat, the serum 35.9 per 1000, and the urine 7.2 per 1000, Hoppe-Seyler thinks it is evident that the transudation is not the sole source of fat in the urine, but that a certain amount of the transuded fluid, deprived of or poorer in fat, passes back either into the lymph or into the blood-vessels. The editor of the *Times and Gazette* suggests a "third but less probable alternative,—that fat is actually formed in the kidneys."

MISCELLANY.

THE REPUBLIC OF LETTERS.—The members of the medical profession in France seem to have a very bitter feeling towards their German confrères. At a recent meeting of the Medical Society of the Department of the Seine, a committee was appointed to investigate the various charges made against the German surgeons during the recent war. This was done in order that the members may vote understandingly upon a motion which affects the German members of the Society. The *Union Médicale* of October 17, while expressing the hope that the charges may be disproved, says, "It would certainly be agreeable to learn that the German universities and medical societies had protested against the barbarous war which has been waged against us,—the bombardment of our hospitals, the expulsion by force of the unhappy inmates of our asylums and infirmaries, the burning of our cities, and the contempt of things and men protected by the Geneva cross and banner." The German surgeons are accused of pillaging libraries, museums, and ambulances, and of exactions practised upon and of bad treatment of the sick,—of all acts, in fine, which would tarnish German medicine forever. In conclusion, the editor says, "On these conditions alone can French physicians—the compatriots of the pure and humane glories of military medicine—the compatriots of Ambrose Paré, of Larrey, of Desgenettes, of Percy—say to the surgeons of Germany, 'You have not dishonored either science, humanity, or the profession. You are yet our confrères. Welcome to our hospitable hearths, and resume your places in our scientific societies.' If not, no."

It will be recollected that Professor Virchow has lately published in his *Archives* a paper with the title "After the War,"

in which he seeks to allay the remaining bitterness engendered by the Franco-German war, and to obtain for France, in the minds of his countrymen, a due recognition of her many and great merits. The *British Medical Journal* of October 21 says that his friendly offices receive little encouragement from one side at least, and in circumstances, too, where nationality might well be forgotten. He lately found himself at Bologna, representing German science at the International Conference for Archæology, on which subject he is an authority. He there met certain brother savants from France whose acquaintance he had made at previous meetings. The professor, it is said, coming up to them at the opening meeting, held out his hand to greet them, but the French men of science turned away with a decisive "Jamais!"

THE ANATOMY OF A SPIRITUALIST.—Mr. Home, the notorious spiritualist, must be somewhat oddly put together; for Lord Lindsay—a respectable nobleman, we believe—swears that he saw him in a spiritual trance, *elongated seven inches*; he measured him against the wall, and marked the place. Lord Lindsay explains this by stating that "the tip of the hip-bone and the short ribs separate;" in Home they are unusually close together. There was no separation of the vertebræ of the spine. The same witness also most positively swore to "levitation,"—Mr. Home floating out of one window and in at another.

Lord Lindsay, however, we learn from the *British Medical Journal*, admits "that he was at one time the subject of a singular optical delusion. He used to see a spectral black dog glide along. He often went up to it, and sometimes passed through it. He was then overworked, and is not now troubled with the black dog." In answer to a question whether Mr. Home's clothes were elongated as well as his body, a gentleman present said a "space was visible between the waistcoat and the trousers."

WHAT BECOMES OF ALL THE CHLORAL?—In a private letter received by Dr. Geo. Harley from Baron Liebig (*Lancet*, October 21), the distinguished chemist makes, among other remarks upon the hydrate of chloral, the following: "I spoke yesterday to a chemical manufacturer, who told me that he makes weekly half a ton of the hydrate of chloral, and that it is used in such enormous quantities in Germany and England that it is impossible to believe that its employment is limited to the sphere of medicine alone. It must be used for other purposes. Some affirm that it finds its way into our beer."

The *London Spectator*, in commenting upon this statement, says there is a much simpler explanation, and asserts that taking chloral is the new and popular vice, particularly among women, and is doing as much harm as alcohol, ether, and other stimulants. Crystallized chloral, it is stated, is kept in thousands of dressing-cases.

THE number of deaths from smallpox in Philadelphia during the weeks ending November 11, 18, and 25 were respectively 101, 133, and 153, 247 of which were of minors.

DEATH FROM SWALLOWING SHOT.—By the advice of an old woman, a man in New York recently took, to relieve constipation, from which he was suffering, half a pound of shot. This shot seems to have given rise to fatal obstruction of the bowels, from which he died.

SMALLPOX AND VACCINATION.—Mr. Waller Lewis, Medical Officer in Chief of the General Post-Office in London,

writes to the *British Medical Journal* that one of the letter-carriers has two children, aged respectively nine and five, both of whom at the time of writing were down with small-pox. Not only were these children successfully vaccinated in infancy, but both have had a previous attack of the disease.

SOCRATES' LAST WORDS.—"Crito! I owe a cock to Æsculapius: will you remember to pay the debt?" were the last words of the dying Socrates. Only a great and a truly good man could think of his doctor's bill at such a time.

CONDURANGO IN ENGLAND.—It appears that our government some time ago forwarded a quantity of the condurango plant to the government of England, in order that its alleged influence over cancer might be tested. A Mr. Davidson, the house surgeon of the Middlesex Hospital, to which some of the drug was forwarded, reports in the *Lancet* that "the results plainly show that condurango is as futile as any of the cancer-cures which have preceded it. It was used in four cases: 1. In an ulcerated epithelioma of the roof of the mouth. 2. In primary cancer of the penis, and secondary injection of the lymphatic glands of both groins. 3. In an ulcerated epithelioma of the scrotum. 4. In an ulcerated scirrhus of the female breast. In all these cases the condurango had positively no effect upon the progress of the disease."

NIEMEYER'S SUCCESSOR.—It is said that Prof. Liebermeister, of Zurich, has been appointed to succeed the late Prof. Niemeyer.

PRESERVING VACCINE VIRUS.—Dr. D. B. Hillis (*The American Journal of Dental Science*; from *The Pharmacist*) recommends the preservation of vaccine virus between layers of dental red rubber, and says that for several years past he has used no new matter, but has, for the sake of experiment, drawn from the stock originally put up as described. He has always found it effective without paying any regard to temperature. A short time ago he successfully vaccinated a patient from a crust which had been lying about his office twenty-seven months.

MEDICAL STUDENTS ABROAD.—The following is given by the *British Medical Journal* as the number of new entrées and total number of students registered at the London Hospitals:

	New entrées.	Total students.
1. University College	88	271
2. Guy's Hospital	86	328
3. St. Bartholomew's Hospital	81	255
4. St. Thomas' "	58	145
5. King's College	43	121
6. London Hospital	29	99
7. St. George's Hospital	22	85
8. St. Mary's "	21	61
9. Middlesex "	19	40
10. Charing-Cross "	11	40
11. Westminster "	10	23
Total	468	1468

In Vienna during the winter semester of the academical year 1870-71 there were 1653 students of medicine, and during the past summer semester there were 1460.

We have as yet seen no announcement of the number of

students in Vienna during the present winter,—the registration is, perhaps, not yet complete; but the medical faculty is announced (*Wien. Med. Pr.*, October 8) as composed of 133 "kollegien," 19 ordinary and 20 extraordinary professors, and 8 privat-docenten.

STUDENTS AT STRASBOURG.—According to a writer in the *Revue de Thérapeutique* (*Medico-Chirurgical Review* of October 1), there have been under the new (Prussian) Faculty at the University of Strasbourg 11 examinations for degrees in the scholastic year 1870-71, against 1014 in the scholastic year 1869-70.

SHARP COMPETITION.—We noticed a few days since, in looking over a medical journal published in 1846, that in that year, on the occasion of a vacancy in the Chair of Obstetrics in the Transylvania University, at Lexington, Ky., there were forty-nine candidates for the position, among whom were represented seventeen different States.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending	
	Nov. 11.	Nov. 18.
Consumption	39	30
Other Diseases of Respiratory Organs	32	30
Diseases of Organs of Circulation	12	13
Diseases of Brain and Nervous System	39	44
Diseases of the Digestive Organs	17	24
Diseases of the Genito-Urinary Organs	10	7
Zymotic Diseases	127	148
Cancer	12	5
Casualties	7	7
Debility	36	29
Intemperance	0	2
Murder	1	1
Old Age	10	14
Scrofula	1	0
Stillborn	15	31
Suicide	0	2
Tetanus	1	2
Tumors	2	0
Unclassifiable	10	16
Unknown	1	5
Totals	372	410
Adults	171	183
Minors	201	227

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM NOVEMBER 5, 1871, TO NOVEMBER 18, 1871, INCLUSIVE.

PETERS, DE WITT C., SURGEON.—By S. O. 431, War Department, A. G. O., November 4, 1871, leave of absence extended sixty days.

FRYER, B. E., ASSISTANT-SURGEON.—By S. O. 87, Military Division of the Missouri, November 9, 1871, leave of absence extended thirty days.

MCCLELLAN, E., ASSISTANT-SURGEON.—By S. O. 440, War Department, A. G. O., November 10, 1871, to report in person to the Commanding General Department of the South for assignment to duty.

CALDWELL, D. G., ASSISTANT-SURGEON.—By S. O. 440, War Department, A. G. O., November 10, 1871, leave of absence extended sixty days.

HOFF, A. H., ASSISTANT-SURGEON.—By S. O. 431, c. s., War Department, A. G. O., relieved from duty in Department of California, to proceed to New York City, and thence to report to the Surgeon-General.

MOFFATT, P., ASSISTANT-SURGEON.—By S. O. 431, c. s., War Department, A. G. O., relieved from duty in Department of the Columbia, to proceed to New York City, and thence to report to the Surgeon-General.

FRIDAY, DECEMBER 15, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE DIFFERENT FORMS OF PNEUMONIA

AND THEIR TERMINATION IN CHRONIC PNEUMONIA—GRAY HEPATIZATION AND ABSCESS—INFILTRATED TUBERCLE.

BY H. C. WOOD, JR., M.D.,

Clinical Lecturer at the Philadelphia Hospital.

GENTLEMEN,—In the last few weeks I have had in my wards several cases of pneumonia, some of which have proved fatal, and to-day I shall take advantage of them as illustrating the different forms of pneumonia, and especially their methods of termination.

You will remember that the lungs contain a number of little sacs, whose coating of epithelium is continuous with that of the tubes uniting the cavities of these sacs, and that between these sacs, forming their walls and binding them together, is a mass of blood-vessels, nerves, and fibrous tissue. With such diverse tissues to deal with, it is inconceivable that pneumonitis or inflammation of the lung should not vary, both in its clinical history and its anatomical appearances, according as it affected one or other of these tissues chiefly. Like many other affections, pneumonia occurs both in an acute and a chronic form, though, as we shall see directly, what is called chronic pneumonia is often rather the result of acute pneumonia than a distinct, true inflammatory disease. The amount of cellular tissue between the air-sacs is so small, the union of blood-vessel, nerve, and cells is so close, and the cavities of the air-vessels are so ready to receive secretion, that it is *a priori* inconceivable that an acute inflammation should occur which should confine itself to the inter-vesicular tissue, and whose exudation should be poured out into the walls—not into the cavities—of the air-sacs; and, as clinical observation bears out this anatomical inference, we are justified in our first assertion, that in all acute pneumonias the exudation takes place into the air-sacs.

A thought as to the anatomical structure of the lungs will at once show what the nature of such exudation must be. The blood-vessels abounding everywhere pour forth the exudation material of inflammation,—fibrinous serum,—which soon coagulates and forms the major part of the matters filling up the air-sacs. At the same time with this fibrinous serum no doubt white blood-corpuscles escape, and the epithelial cells lining the air-sacs, responding to the general irritation, multiply, so that under the microscope the exuded material is seen to be made up both of fibrinous filaments and cellular elements.

In most inflammations, as is well known, there are two diverse possible exudations, whose nature is largely determined by, or at least associated with, a certain condition of the general system.

Thus, pleurisy in a debauchee produces a profuse serous exudation, while in the strong man it plasters the membrane with lymph. The same thing occurs in pneumonia. In the vigorous adult the exudation, even as first poured out, is almost a jelly, while in the old or prematurely broken-down it is a thin liquid, giving origin to the so-called prune-juice sputum.

There can be no doubt that in these different forms of ordinary fibrinous pneumonia the proportion of the cell-element varies in the exudation; yet it is always a subservient, secondary part of the exuded material.

There is, however, a third form of exudation, in which

the cellular element predominates, and whose character is due not so much to any recognizable condition of the system as to the anatomical construction of the lung.

Remembering the primary fact that I mentioned, that the lining membrane of the bronchial tube is continuous with that of the air-cells, and bearing in mind also the tendency which all inflammations have to travel along a tissue or membrane affected rather than to pass to the diverse tissues upon which such membrane rests,—remembering, I repeat, these facts, you will see at once that *a priori* we would expect to find a form of pneumonia whose origin should be a catarrhal or epithelial inflammation of the bronchial tubes, and whose anatomical characters should be catarrhal rather than fibrinous, or, in other words, whose exudation should be composed chiefly of imperfectly-developed epithelial cells or mucous corpuscles. It also seems to be an anatomical necessity that such disease should at first affect small isolated portions of the lungs, as the minute lobules, although by the coalescence of these the whole lobe of a lung may at last be consolidated. Every bronchial tube has subject to it as it were a certain territory of lobules, forming, it is evident, in regard to a bronchial tube of any size, a triangular mass, whose apex is the tube in question, its base the outer portion of the lungs.

Clinical observation has continually demonstrated that in children this form of acute pneumonia is exceedingly common. In the midst of an attack of capillary bronchitis the temperature of a child will suddenly rise two or even three degrees, the face will become more anxious, the breathing more rapid, the pulse quicker; and on such evidence, although the physical signs may remain unchanged, you will have good grounds for fearing that catarrhal pneumonia has set in.

Of the clinical history of such a case I do not propose further to speak to-day, as it is foreign from my object. The child dies very often sooner or later after the seizure, and on post-mortem examination there are found consolidated lobules in the lungs, whose consolidating exudation, as seen by the aid of the microscope, is composed chiefly of numerous globular or irregular nucleated epithelial elements. This, then, represents a typical case of acute catarrhal pneumonia, very common in children, but rare in adults. Why rare in adults? Partly, no doubt, because the developmental activity of the child is greater than that of the adult, and the epithelial tissues partaking of this excessive developmental power are more ready for that rapid production of cells which we call catarrhal inflammation, and partly because the formation of such pneumonic consolidation in the child is often due primarily not so much to a passage of the inflammation from the bronchial tubes to the air-vesicles as to a collapse of the latter from the child's want of power to expel the secretions of the bronchial tubes and to the anatomical changes consequent on such collapse. In the adult, collapse of the lobules of the lung from such cause is so rare, except in certain low fevers, that it may be practically said not to occur.

Acute catarrhal pneumonia causally dependent upon bronchitis is, then, especially a disease of children; but, although I have never had opportunity of verifying my diagnosis by post-mortem examination, I am confident that I have witnessed the disease several times in adults. The following is the history of one of these cases:

Case I.—P. S., aged 25, native of Ireland, and free from any known hereditary taint, came into the hospital February 2, 1871. He stated that, six weeks before, he had been taken with a severe cough after exposure, and that it had continued until the present, at times getting better, and then worse again, but never laying him up at any time. When admitted, he was in good flesh, and asserted that until within a week his appe-

tite had been vigorous and strength as usual. He had a good deal of cough, but had not spit blood. His pulse was from 105 to 115; his respirations 40 a minute. Morning temperature, $104\frac{1}{2}^{\circ}$; evening, 103° .

On auscultation, both right and left lungs were found to be full of fine subcrepitant and sibilant râles. He was put upon a mild expectorant. Stupes, dry cups, and poultices were applied to the chest, and were constantly had recourse to subsequently so long as the acute disease lasted.

I did not see him again until the 6th. His temperature had during that interval varied very irregularly, its lowest range being $102\frac{1}{2}^{\circ}$, on the morning of the 4th, and its highest $105\frac{1}{2}^{\circ}$, on the same day. His pulse had been from 100 to 110; his respirations 40 to 45 a minute. On the 6th his morning temperature was 104° , his pulse 128. Auscultation showed the right lung posteriorly to be everywhere full of sonorous râles and fine and coarse moist râles, and anteriorly at the apex offering a very loud, coarse, subcrepitant râle, masking a distant sonorous or tubular râle. In the left lung the vesicular murmur was distinct posteriorly, but sibilant in its character, and with some moist râles, heard especially on inspiration. Percussion produced over both lungs a similar note posteriorly; but anteriorly, while it was abnormally resonant all over the left lung, at the right apex it was hard and wooden, very wanting in volume, high-pitched, and accompanied by a markedly increased sense of resistance to the finger as compared with the other side.

Inspection revealed the chest to be full and distended, with the interspaces hardly detectable during the forced respiration. On palpation a distinct thrill was perceptible.

The sputum was exceedingly profuse, frothy, semitranslucent, thick, and gelatinous, with opaque whitish masses, and portions which were rusty-colored.

He was ordered tinct. verat. virid. On the 6th he took three doses of four drops each, and by night his temperature had fallen $2\frac{1}{2}^{\circ}$ and his pulse some twenty beats. The night of the 6th he rested much better than he had done, perhaps owing to his taking one-fourth of a grain of morphia. During the 7th he took three doses of two drops each. His morning temperature was $101\frac{1}{2}^{\circ}$; his evening, 101° ; his pulse at 6 P.M., 104; respirations, 32. The veratrum viride was continued, though no note was taken of the amount, and his temperature fell to $97\frac{1}{2}^{\circ}$ on the 8th, and his pulse to 84, his respirations remaining at 32, and the physical signs not undergoing any decided change. From the 8th to the 11th the lungs cleared up very much, there being, however, some moist râles heard in both lungs posteriorly, with decided dullness, rude respiration, and very numerous coarse subcrepitant râles at the right apex. The character of the sputum had not changed very much; it was, however, less in quantity and less rusty.

The tincture of veratrum viride was suspended, and the following ordered:

R Ammoniz Muriat., $\mathfrak{z}\text{i}$, $\mathfrak{D}\text{i}$;
Syr. Pruni Virgin., $\mathfrak{f}\mathfrak{z}\text{ii}$.

S.—Teaspoonful every two hours.

Dry cups and poultices had been previously applied to the right apex constantly; it was now ordered to be blistered repeatedly.

February 16.—Nothing abnormal could be discovered in the lungs, save the dullness on percussion, the rude, almost bronchial breathing, and the moist râles at the right apex.

The note reads on February 20, "The man coughs much less. Sputum mostly gelatinous, sometimes pseudo-nummular, not rarely containing pure blood, or blood and purulent matter mixed. He is gaining strength and flesh. The physical signs at right apex the same, but not so pronounced. The temperature has only once been above 99° since the fall on the 8th."

All medicine stopped. Ordered cod-liver oil and whiskey; the right apex to be kept sore with croton oil.

From this time the man gradually got well.

On March 19, a most careful physical examination showed that there was no distinct difference in percussion-note of the two apices, and there was a breezy vesicular murmur at right apex. There had been no cough for some days, and the man was very sleek and fat. He was kept some weeks under

observation, and was finally discharged, apparently perfectly recovered.

There are some points of very great clinical importance in this case. The wasting, persistent cough, and bloody expectoration, with the marked signs of consolidation at the right apex, would not many years back have, according to all recognized rules, necessitated the diagnosis of tubercular phthisis. The final recovery shows beyond cavil that the case was not tubercular, and the whole clinical history demonstrates that the disease was not ordinary pneumonia. The case must have been one in which the bronchial tubes were chiefly and primarily affected, and the lung-tissue condensed by a secondary epithelial exudation. In a word, I imagine we have here a typical case of catarrhal pneumonia,—an attack which under more unfavorable circumstances of care and constitution would have led the way to the so-called infiltrated tubercle, as in the case which I shall detail later.

As a therapeutic study, the whole record is worthy of examination, but I would especially call attention to the rapid fall in the temperature, pulse-rate, and number of respirations per minute which occurred just at the time when the patient came well under the influence of veratrum viride, and which I am strongly inclined to attribute to that drug.

The question now naturally arises, Is there such a disease as acute catarrhal pneumonia, not dependent upon previous bronchial disease? Niemeyer says that there is not. On the other hand, Rindfleisch says that "of course we frequently enough have acute pneumonia of the catarrhal form *without bronchitis*."

This apparent contradiction of authorities seems to me to depend probably on the use of the name. If by catarrhal pneumonia is meant an inflammatory affection commencing in the bronchial tubes and spreading to the air-cells, of course there can be no catarrhal pneumonia without previous bronchial inflammation; but if the term simply means, as Rindfleisch apparently uses it, that in such pneumonitis the exudation is chiefly cellular, I do not see how the existence of such disease can be doubted. But I shall refer to this more in detail hereafter.

As you well know, ordinary pneumonia—that which is known by the Germans as croupous, by the French as fibrinous—is normally a cyclical disease, in which, at the end of a period varying from three to seven days, the exudation being completed, there is a sudden fall in the temperature and abatement of the general symptoms, the patient entering as it were upon convalescence, or at least a period of repair, with the road to health open to him only by the freeing of the vesicles from their contained exudation. As the little plugs that fill the air-sacs are mostly much larger than the openings into the bronchial tubes, it is necessary that the exudation matter should be softened if it is to be expelled or absorbed. Rindfleisch believes that but a comparatively trifling portion of the exudation is absorbed, and that nearly all of it is cast out by expectoration. But, from clinical observation, I think that absorption bears a very much more important part in the removal of the exudation than this. However this may be, there can be no doubt that both absorption and expectoration aid in the removal, and that to facilitate these the fibrinous plug undergoes two distinct changes,—one a fatty degeneration, the second the conversion of the fibrinous filaments into a soft gelatinous mass, chemically allied to mucin; and that while this is occurring there is a free formation of cells upon, and, to some extent, even within, the alveolar walls. If matters progress favorably after the exudation is softened, it is gradually removed by expectoration and absorption, so that at last the lung is free and the patient well. Unfortunately, however, not

always does the disease end so favorably; for, instead of resolution following exudation, the latter may remain unchanged, and the result be, first, chronic pneumonia; or, secondly, suppurative changes in the lungs may occur, and the so-called gray hepatization be the result; or, thirdly, caseous degeneration may ensue, and the so-called infiltrated tubercle result; or, fourthly, gangrene of the lung may take place.

Let us now take up these various unfavorable terminations as illustrated by the post-mortem specimens before you, and consider, especially anatomically, how they are brought about.

The anatomical cause of the chronic pneumonia remaining appears to be simply the failure of the ordinary changes to occur. The fibrin does not undergo change into mucin, and the cells seem simply to shrivel away, but not to be in sufficient quantity to cause disintegration of the entire mass. Why these changes fail to occur I do not know. Possibly there is something in the original constitution of the exudation which interferes; possibly the ancients were not altogether wrong in their belief in the absorbents playing an active part in the physiological and pathological economy.

Whatever be the cause, in this hospital this termination of pneumonia is exceedingly common; although many writers do not attach so much importance to it as I think it deserves.

Niemeyer makes no distinct allusion to it in the article in his *Practice upon pneumonia*. Jaccoud, however (*Traité de Pathologie interne*, tome ii. p. 49), describes it very distinctly. He states that there are two forms of it: one in which the arrest of the acute process seems to occur at the end of the stage of exudation; the other in which it takes place during the period of liquefaction and absorption. He says that in the first case the lung-tissue is compact, homogeneous, impermeable, vaguely granular. The appearance is very much that of the acute disease, the only difference being in the color and contained liquids; the hyperæmia has disappeared, and the color become slaty-gray, with black spots, due to the deposition of pigment granules; the absorption of the liquid is total, so that the tissue is dry and condensed. In the other case, the aspect of the lesion is different: it does not form a compact mass all in one block; the permeability of the lung is established in places, and the alveolar cavities contain some fibrin, dried and fatty purulent globules, and atrophied alveolar cells: the breaking down of the exudation has taken place, but the elimination has been arrested.

Of the second of these forms I know nothing from experience; the first I have seen repeatedly. How long this form of chronic pneumonia will endure I do not know, but I have seen many cases in which the history pointed to its having existed for a long time. It is probable that in many instances it finally causes chronic interstitial pneumonia, and, at last, contraction and a cirrhotic condition of the lung, or else ends in caseous degeneration. That it often does not do so for a very long time,—that patients far advanced in life die, and portions of the lungs are found affected with chronic pneumonia, whose origin is obscured in the far past and whose existence was not suspected during life,—I most certainly know.

The following is the report of the fatal case, the lungs from which are upon the table:

Case II.—Mary W., aged 38, mother of three children, house-servant, was admitted into the hospital November 3, 1871. She was so exhausted that no very clear history could be elicited, but she stated that three weeks before her entrance she had been taken with severe pain in the right side, and breathlessness, and had been ill ever since.

She was exceedingly weak, and her intellect was greatly

oppressed. She had cough without expectoration, pulse from 110 to 120, and abdomen very tympanitic.

On physical examination there was abnormal percussion resonance, with puerile vesicular murmur, over the whole of the left lung. On the right chest, both anteriorly and posteriorly, absolute flat and hard percussion dulness from base to apex. Over the upper lobe of the lung, both anteriorly and posteriorly, there were coarse, moist bronchial râles and tubular breathing. On a level with the angle of the scapula these had faded away to a faint, distant tubular breathing; below this was absolute silence. Old friction-râles could be heard laterally on forced inspiration. Vocal fremitus and resonance were much greater on the right than on the left side.

The woman died two or three days after admission.

Autopsy.—Left lung normal. Right lung absolutely solid from top to bottom; agglutinated to the side by not very old adhesions, and, when taken out, bearing very plainly the marks of the ribs on it. When cut into, very firm and solid, light-grayish or almost whitish, with numerous dark spots or pigment depots. Nowhere any signs of softening or cavities.

The second termination of pneumonia in our schedule is in diffuse suppuration, if such term is allowable,—that known as gray hepatization. This occurred in the case which I had before you at my last clinic, the specimen from which is on the table.

It is always to be feared in any case when the sudden fall of temperature—the crisis—fails to develop, or, developing itself, fails to persist, and, at the same time, very low typhoid symptoms are manifested; and especially is the danger imminent when along with these symptoms coarse moist râles are to be heard in the affected lung. Some authorities ascribe importance to distinct chills or repeated slight shiverings as diagnostic of the formation of pus in the lungs.

These were not present at all in the case herein described, and my experience leads me to coincide with the opinion expressed by Walshe, that it must be a very clear conjunction of symptoms and physical signs which warrants an absolute diagnosis of diffuse suppuration in a lung.

Now, what are the anatomical differences between the processes of resolution and gray hepatization? It must be borne in mind that in cases of resolution during the time when the exuded material is being removed there is a free formation of cells in the epithelium lining the air-sacs, and that there is also a tendency to over-rapid cell-increase within the alveolar walls. Now, in the degeneration of which we are speaking, this tendency being exaggerated, cell-multiplication takes place in both of these positions with great rapidity. Within and without the walls of the vesicles cells multiply. More than this, I am convinced, though not in a position absolutely to affirm it as proven, that in all these cases from the very onset the inflammatory products are largely cellular; that the exuded material is very poor in fibrin and rich in cells; that, in other words, the affection approaches closely the catarrhal type. The sputum in such cases certainly indicates it; and it is inconceivable that a mass composed chiefly of fibrin filament should be changed into a purulent, cellular liquid.

However this may be, excessive cell-multiplication—a multiplication so rapid that reproduction takes place at the expense of vitality—occurs on and within the walls of the alveoli of a lung about to undergo the purulent degradation. Under its influence the parenchyma of the lungs swells up and becomes more dense and heavy. At the same time the granular appearance which the filled alveoli produce in the red hepatized lung becomes less marked, from the swelling of the alveolar walls, and the color changes from reddish to whitish or yellowish. This alteration of the color is evidently due in some measure directly to the rapidly-increasing cells within and without the alveoli, but

chiefly to the pressure which they exert upon the blood-vessels, preventing the passage of blood into the affected tissues, which therefore become exceedingly anæmic.

The degeneration of these cells into pus or pus-like globules is of double origin. In the first place, their own native want of vitality facilitates their death; but I believe an even more important factor is the pressure which they themselves exert, cutting off their supply of blood,—i.e. of nutriment,—and causing death by starvation. I want to lay stress upon this point, because this purulent degeneration of the lung is the same in kind as the caseous degeneration,—the so-called infiltrated tubercle,—caused by the same anatomical changes, only that in the one case the course is rapid, in the other slow; in the one the cells multiply quickly, drive out the blood, and produce rapid local death, with exudation of more or less serum, in the other the cell-multiplication is slower, the blood-current is more gradually lessened, the death takes place more slowly, and is accompanied with desiccation. The two cases bear almost the same relation to each other that the moist gangrene which follows sudden arrest of circulation does to the dry gangrene caused by atheromatous arteries.

Wherever a large amount of lung-tissue is involved in the gray hepatization, death of the patient follows rapidly; but in cases in which but a small amount of tissue is involved, and, therefore, life endures, or in cases like the one I showed you, in which the process is much more early or intense in one portion of a lung than in the remainder, the degradation goes on to its full conclusion, the whole tissue especially involved perishes, and an abscess results. Such cases are, however, very rare, Trousseau stating that he had had twenty-five years of hospital experience before seeing one. The following is the record of the case the specimens from which are on the table:

Case III.—J. H., aged 32. A very intemperate man. Entered the hospital November 2, 1871. He stated that for the previous week, or longer, he had been drinking very hard, lying out at nights, and that he had been taken sick several days before with sick stomach, headache, slight pain in the side, and cough.

I saw him first November 3. He had passed a restless, delirious night; had a feeble pulse of 100, and a very anxious expression of face. At the apex of right lung anteriorly could be heard a coarse crepitant r  le to the fourth rib, and with it was some dulness on percussion. He had a free expectoration of dark, brownish, leaden, slightly gelatinous sputum. He was ordered opium, gr. i, every three hours, with chloral at night, and poultices over the apex of the lung.

November 6.—His condition had not improved. The pulse was 110. Tongue dry, red and smooth on edges, yellowish fur in the centre. There had been the day previous slight diarrhoea without tympany. At night he was very delirious and restless. The sputa were variable, at times almost truly pneumonic, but were mostly brownish and thin. At right apex to fourth rib was high-pitched percussion-note, with but little volume and wooden tone, and tubular breathing with crepitant r  les. Ordered whiskey f  vi in twenty-four hours.

The following is extracted from my note-book:

“November 9.—Last night the only one at all free from delirium. His condition seems, however, very bad this morning. His surface is bathed with sweat. Pulse 120. Face very anxious. Tongue red, dry, cracked. Ordered tincture of digitalis three times a day.

“November 11.—Since last note, he has been almost wildly delirious every night; is in low, muttering delirium this morning. Has to be kept tied in bed day and night. The percussion dulness and bronchial breathing are extending downwards,—now reach below the nipple. The general symptoms are all worse, but the pulse is full,—a marked digitalis pulse,—78 per minute. The sputum is very free, almost bronchoreic, gelatinous, frothy, not at all rusty. Stopped

digitalis. Musk was directed, but, it not being obtainable, castor was ordered,—30 grains every two hours in emulsion. Quinine was also directed.

“November 12.—Yesterday afternoon, after taking four doses of castor, he became rational, and during the night was scarcely at all flighty; does not have to be strapped down in bed. He is now rational,—talks about himself. There are decidedly more coarse moist r  les at right apex.

“November 13.—Has been much quieter and more rational, but is somewhat flighty this morning.”

From this time to November 15 the man gradually sank. On the 14th, the moist r  les were most profuse, marking the bronchial breathing. On the 16th, cavernous respiration was detected in the right apex. On the 17th, he died, with profoundly typhoid symptoms.

Autopsy.—Left lung healthy; right lung whole. Upper lobe in a state of marked gray hepatization. On its apical surface were a number of little vesicles (distended air-sacs) filled with pus, and most of its apical fourth was occupied by a recent cavity, with irregular shreddy walls, formed of lung-parenchyma, gradually melting into the abscess.

As has, I hope, been made sufficiently clear, there are two forms of pneumonia,—the one to which the name catarrhal may be applied, the other which we may know as fibrinous. In the first, the exudation product is largely made of cells,—imperfectly-developed epithelial elements; in the other, the exuded matter is principally fibrinous. Now, I believe that although there are these two distinct types of pneumonia, yet that there is also in nature every gradation between them; that in some middle cases the cellular and fibrinous elements or material may be as it were about fairly balanced, and that in others the fibrinous material most abundantly, while in still other cases of primary pneumonia from the very outset the cellular element is as abundant as in the exudation of the lobular pneumonia secondary upon bronchial inflammation. It is in these cases of cellular exudation especially that the last termination of acute pneumonia of which I shall to-day speak is especially apt to occur,—that which was formerly known as acute infiltrated tubercle.

There is in such cases of pneumonia, from the very outset, an intense and rapid multiplication upon the alveolar walls of the epithelial cells, which, accumulating more and more, at last entirely fill up the alveoli affected. It is self-evident that such an exudation is not nearly so easily gotten rid of as a fibrinous one. The latter may soften and break down into a mucoid mass, but cells do not do this readily. More than this, the tendency to reproduction of cells does not confine itself to the epithelial tissue, but affects also the inter-alveolar tissue, until at last a solid mass is formed, the cells within crowding those without the alveoli. As a result, pressure upon the blood-vessels is exerted, until their calibre is obliterated or the current in them stagnated and the supply of blood to the part is cut off. What then happens? Death of the part affected. The deprivation of blood is, however, gradual, not sudden, and the death is slow. The cells in the interior of the alveoli are the first to suffer, because they are the farthest removed from the nutritive supplies; having from their very birth a tendency to fatty degeneration, they slowly undergo it, and at the same time shrivel up under the pressure, which squeezes out of the tissue the fluids contained in it. Even with the naked eye the change can be marked commencing as a whitish spot in the middle of a dark mass of consolidated tissue, and spreading from within outwards.

There is nothing strange in this,—nothing peculiar to the lungs.

Some years ago, Dr. Wilks, of London, declared that leucocyth  mia was a disease allied to tuberculosis, because he found whitish masses in the spleen, whose elements, under the microscope, resembled greatly the “tubercle-cell,” so called,—little, shrivelled, fatty cells.

His reasoning was not so absurd as it at first seems. If there had been any such thing as "tubercle" in the sense that he understood it, he was right in considering the splenic masses as deposits, for they were truly in their origin, as well as in their appearance, similar to "infiltrated tubercle;" the real absurdity consisted in considering infiltrated tubercle a deposit. I said the origin of these white masses is similar to that of infiltrated tubercle, and I think you will agree with me when I describe it.

In leucocythæmia there is a hyperplasia of the cells of the spleen, similar to what takes place in the lungs in catarrhal pneumonia, until at last some acini of the spleen become so crowded that no blood can flow through them. Several acini together undergo this process, so that at last a dark mass is formed, in which the blood-current has stagnated. Thus the cells, imperfect from their rapid birth,—cut off from their supply of blood,—undergo shrivelling and fatty degeneration. As in the case of the lungs, in the centre of the mass where the blood-current has first stagnated and the cells are most crowded, the white spot which marks the change first appears, and spreads from within outwards, until at last a mass of "deposit" is formed. The processes are precisely parallel in the lung and in the spleen.

Let us return to our lung from this digression. The degeneration of the cells of the affected part, continuing, spreads from the centre of an alveolar cavity to the alveolar walls, which are soon involved in the common death. Then from the portions of lung not yet affected serum begins to be thrown out, and to permeate the mass, until at last the whole diseased tissue breaks down, melting away alveolar walls and all, and a cavity results.

Such, gentlemen, is the idea of the course of infiltrated tubercle, omitting the non-essential details.

You see that there is no deposit,—that there is an exact parallelism between the caseous degeneration and the gray hepatization,—the differences being in the rapidity rather than in the nature of the changes.

The lung on the table before me is a marked example of this caseous degeneration.

The record of the case will be given you directly. The history, unfortunately, is not so complete as is desirable. There was an allusion made by the patient to an attack of lung-trouble some years before, but, whatever that may have been, he appeared to have recovered from it. The disease was certainly very acute; and if, as he affirmed, the whole course was run through in a couple of months, it was certainly a marked case of galloping consumption.

Case IV.—J. W., æt. 28, single. Came into the wards of the hospital October 22, 1871. He was in such a typhoid condition that his history was obtainable with some difficulty. He stated, however, that none of his relatives had ever died of consumption; that he had been taken sick only five weeks previously, after exposure; that he had lost flesh very much in that time. This history was confirmed in so far that a former employer stated that he had left him five months previously to go to boating, and that when he left he was in perfect health. The notes in his case read as follows:

"October 23.—The patient is very weak and emaciated, with a dry scurfy skin. He has a hacking cough, but spits up very little, evidently swallowing his sputum; that which is expectorated is muco-purulent.

"*Right chest.*—Abnormal percussion resonance all over the lung, with puerile vesicular murmur, and at anterior apex the expiratory sound almost tubular.

"*Left chest.*—Percussion-note anteriorly and very wanting in volume to an inch above line of ensiform cartilage, where it becomes colonic; laterally much the same, save that high up it is very high in pitch. On auscultation, all over anterior upper lobe cavernous breathing, without moist râles, and most intense in middle front of third rib. In supra-spinous region

rather distant gurgling and blowing râles, with painfully-resonant cough. Laterally and inferiorly, both in front and behind, friction-râles, moist crackling, and tubular breathing.

"October 29.—No change, except patient is weaker. He expectorates about one-third of a pint in twenty-four hours.

"November 2.—All over left anterior chest to seventh rib, where note becomes colonic, there is short, low-pitched, very volumeless percussion-note, save at the extreme apex, especially to the left side, where the percussion-note has much more volume. All over this region are cavernous râles and very loud, thin, coarse gurgling, with squeaking râles at the apex, and thin moist râles especially abundant below. Very pronounced pectoriloquy, with a very decided whispering echo to the voice-sound. Moist râles are heard in right lung inferiorly.

"November 6.—Right lung, the lobes full of moist râles, and dull on percussion.

"November 12.—Man died of exhaustion."

Autopsy.—Whole upper lobe of left lung resolved into an enormous cavity, evidently formed by the coalescence of smaller cavities. Lower lobe solid, with chronic pneumonia, undergoing caseous degeneration, and containing some small cavities,—apparently enlarged bronchial tubes. Pleura forming a thick coating to the whole upper lobe of the lung.

Right lung, upper lobe markedly emphysematous; lower lobe consolidated with wedge-shaped masses, in which the color was changing to that of caseous degeneration.

ORIGINAL COMMUNICATIONS.

A CASE OF TRAUMATIC TETANUS

TREATED WITH CALABAR BEAN AND CHLORAL, RESULTING IN DEATH.

BY WILLIAM H. BENNETT, M.D.

IN the number of the *Medical Times* for January 16, 1871, Dr. Packard gives an account of what he terms a "Case of Severe Traumatic Tetanus resulting favorably under the Use of Calabar Bean." The following case, occurring also in the service of Dr. Packard (by whose kindness I am permitted to publish it), gives a darker picture. The two cases taken together illustrate what has now been pretty well demonstrated in regard to the remedial power of calabar bean in this disease,—that, while it will not cure tetanus, it will generally, in some degree, relax the contracted muscles and diminish the frequency and violence of the paroxysms, and hence is a valuable palliative in all cases. It is especially so in those coming on late after the receipt of the injury and tending to run a chronic course resulting in recovery, but in which much depends upon our ability to sustain the vital powers until Nature accomplishes a cure.

C. J. G., æt. 18, white, was admitted to the Episcopal Hospital on the evening of July 4, 1871. During the afternoon, while holding his left hand over the muzzle of a pistol loaded with small shot, the firearm was accidentally discharged, and its contents entered his hand, making a wound with an external opening in the centre of the palmar surface about one and a half inches in diameter, and extending through to the subcutaneous tissue of the dorsal surface. The metacarpal bone of the middle finger was broken across and somewhat splintered. The deep tissues were much lacerated and charred, and when he was admitted a mass of them protruded from the external opening, almost entirely closing it. The wound had been previously examined and cleaned, and no foreign bodies could then be discovered.

He was of robust frame, in good health, and had not lost a very large amount of blood. He was placed in bed, and an evaporating dressing of lead-water and laudanum applied to the hand. He was carefully warned of the dangerous conse-

quences which might result from taking cold, and every precaution was employed to avoid exposure to draughts of air or sudden changes of temperature. The lead-water and laudanum dressing was renewed day by day until the 8th of July, when a poultice was applied for forty-eight hours, and then a covered dressing of lead-water and laudanum substituted for it. He was placed on low diet for the first few days, until suppuration was established, and then a generous diet was ordered.

The wound did well from the first. The slough had mostly separated by the 11th, and the pus was discharging freely, both from the opening in the palm—now entirely clear—and from one on the dorsum, caused by the sloughing of a small portion of injured skin and subcutaneous tissue.

At 12 A.M. on the 11th, seven days after the accident, while eating his dinner, he complained of a little unusual feeling about his throat, which he had had most of the morning, but to which his attention was more particularly called by a slight difficulty in swallowing his food. He also stated, in answer to a question, that he had a little pain in the nape of his neck, and there appeared to be very slight trismus. These symptoms, however, were all so slight that it was thought best to delay any active treatment until the diagnosis should be more clearly made out; and nothing therefore was done beyond ordering a liniment of chloroform and tincture of aconite-root for the neck, and carefully watching for further developments. It was now discovered that on the night of the 9th he had left his bed and gone to the water-closet, which has a stone floor, without putting on either slippers or clothing; also, that for some days he had been in the habit while eating his meals of sitting on the side of his bed, only imperfectly covered with the bedclothing, with his feet on the floor. No other history of exposure to cold could be discovered.

At 7 P.M. of the 11th, no change in his symptoms since morning was perceptible.

At 8 A.M. of the 12th, the trismus was more marked, but there was little increase either in the pain in the neck or the difficulty in swallowing. A slightly contemptuous expression seemed to be due to commencing risus sardonicus. His pulse was 92, of good volume and strength, and his respirations 24. His pupils were natural; his mind clear and cheerful. His wound was healthy, and, with the exception of the ominous symptoms referred to, he seemed to be improving as rapidly as possible. Two grains of the extract of calabar bean, known to be of good quality, were then given to him, and the dose was repeated at 10 A.M.

By 12 M. he had begun to feel an occasional pain shoot up the arm from his injured hand. Ether was now administered, and an incision about four inches in length made on the dorsum of the hand. A portion of the wad of the pistol, and two small shot, which had been deeply lodged in the wound undiscovered, were removed, and the jagged ends of the fractured metacarpal bone cut off.

At 2 P.M. he had reacted from the effects of the ether; two grains of the extract of calabar bean were given him, and half a grain of sulphate of morphia was injected beneath the skin of the left arm. Two grains of the extract were also administered at four and two grains at six o'clock. The combined effect of ether, calabar bean, and morphia produced some nausea.

At 7 P.M. his pupils were well contracted. His pulse was 120. Little change in the amount of trismus had occurred since morning. He now had some twitching of the left arm and pain still occasionally darting through it. His skin was bathed in perspiration. The two-grain doses of the extract were repeated at 8 and 10 P.M.

At 2 A.M. of the 13th his symptoms were all worse. Two grains more of the extract were given him, and the dose was repeated at three, four, seven, and eight o'clock A.M.

At 8.30 A.M. his pulse was about 80, but very irregular. The twitching and darting pain of the arm had kept him awake all night. The trismus, risus sardonicus, and difficulty in swallowing had increased. He was much weaker. There was now some opisthotonos, and both this and the trismus were occasionally violently and spasmodically increased. He had had two large, well-formed stools during the previous twenty-four hours, and his urine was passed without difficulty.

During the day the extract of calabar bean was given to

him nearly every hour, in such doses as were thought at the time judicious, his pupils being kept constantly contracted to a very small point. In all, twenty-four grains were administered in eleven hours. Half a grain of sulphate of morphia was given hypodermically at noon, and he had a little sleep after it. The following note was made of his condition at 7 P.M.: All of his symptoms have to-day been gradually growing worse. His jaws have been slowly approximating. The spasmodic contractions of his muscles are more frequent and of longer duration. They are at times, but not frequently, excited by noise, touch, or other sudden impression. He has great difficulty in swallowing, but by patient effort he has been able to take his medicine regularly, and some liquid food and stimulus. After each mouthful, however, a portion is blown out between his nearly-closed teeth, with a noise almost peculiar to this disease. His voice is still nearly natural. He has all day been bathed in a profuse perspiration. He has had some nausea, and once vomited a little. His mind has been perfectly clear, and his calmness in such suffering is extraordinary. His pulse is 120, and his respiration 26.

Although the calabar bean seemed in some measure to control the frequency and violence of the paroxysms,* yet he appeared to be growing so steadily worse in all of his symptoms, and so rapidly weaker, it was thought advisable to try some other remedy, and chloral hydrate was substituted for it. This was ordered to be given in doses of twenty grains every two hours. Chloroform was also applied along the spine. He soon had a little sleep, from which he was awakened by one of the paroxysms; and, although he continued thus to sleep for short periods during the night, his symptoms rapidly grew worse.

At 4.30 A.M. of the 14th, during a paroxysm brought on by an attempt to give him his medicine, his tongue was caught between his teeth, badly lacerated, and tightly held there for some time. The paroxysms were now returning about every ten minutes, and were so severe as at times to nearly throw him out of his bed. It was therefore determined to put him under the influence of chloroform. This was administered by inhalation in quantities just sufficient to keep him unconscious during the paroxysms. These still continued to increase in frequency, duration, and severity during the morning, his strength gradually became exhausted, and at 3.30 P.M. he died.

No post-mortem examination was permitted.

SOME NOTES ON THE USE OF HYDRATE OF CHLORAL.

BY JOSEPH R. BECK, M.D.,

Fort Wayne, Ind.

ABOUT two years ago this drug was brought in a very conspicuous manner to the notice of the profession, although it had been used by a few physicians for a much longer period. I refrained from using it for a time, preferring to allow others the pleasure of experimenting, but intending to make use of it when I should become convinced of its utility from the published testimony of other members of the profession. To this end all the literature on the subject was eagerly sought for, carefully read, and thoroughly digested; and although there is a great mass of such evidence extant, yet, according to my view, it is so contradictory and vague in point of conclusions that it even now seems as if it were just as well not to read any of it. I began—very cautiously, it is true—to administer the remedy in appropriate cases, and in what seemed to be small doses, and I have not yet, after a

* In a case of traumatic tetanus occurring in the hospital a short time before, in which the extract of calabar bean was employed, the patient stated that he felt "every dose do him good," and when it was almost impossible for him to swallow, he begged that the medicine might still be given him, as he felt such relief from it. The case, however, proved rapidly fatal.

fair trial of nearly two years, had reason to think that I erred in pursuing this course.

It is not proposed within the limits of so brief an article to go into detail as to the analytical chemistry of the hydrate of chloral, nor even to discuss its therapeutic action, but simply to add my experience in the use of the drug to the current literature on the subject. It is a small mite to contribute, to be sure, but I am satisfied that the majority of the profession use this valuable medicine in so injudicious and indiscriminate a manner that frequently great harm is the result. Under these circumstances, as has always been the case, the drug comes in for the lion's share of the opprobrium, whereas, if the truth were told, the practitioner really deserves it.

Continuing our review of the subject, I shall first speak of a few cases under my observation in which beneficial results were observed from the administration of the drug, and then proceed to remark in the briefest possible manner upon what seems to me to be proper to be said as to the dose. Although chloral has never produced bad effects in a single instance, and has never failed to come up to my most sanguine expectations in its results, yet I am impelled to say that I do not possess that overweening confidence in its universal efficacy which some of my brother practitioners seem to have. While hydrate of chloral is undoubtedly a very valuable contribution to our materia medica, and fills a gap in therapeutics which seems to have been destined for it, yet I do not see the propriety of vaunting its praises in *numberless* diseases, and over and above *any* and *every other* remedy; and when I notice such literature in our journals, the words of Dr. Samuel Wilks recur forcibly to my mind, wherein he says (London *Lancet*, February 25), "The universal use of chloral in every possible malady presents a most pitiable exhibition of the weakness of our therapeutics. Every one who is ill has a pain or an ache, or is irritable and restless, and at length we have got a panacea. What can be thought of our art, when we are so ready to catch at a new drug and administer it to everybody? Now it is chloral; yesterday it was carbolic acid; and before that it was bromide of potassium. Just as, two years ago, every one was taking this last medicine, so now every one is swallowing chloral. It is a most sorry patchwork piece of business."

While I widely dissent from the intimation of Dr. Wilks that chloral is a "humbug," yet I am convinced that its universal administration for almost every known disease savors very much to me of a very patent humbug; and the conviction is also forced upon me that, whereas ordinary humbugs have the merit of being at least harmless, the immense doses of hydrate of chloral which some writers recommend would make of this drug, at least in some cases, a very dangerous humbug.

I cull from my case-book for the last six months of 1870 and the first six months of 1871 the following cases, which will better than any argument convey to the reader my ideas as to the administration of chloral:

Case I.—E. M., aged sixteen years. Is passing gall-stones. Ether ineffectual; large doses of opium equally so. Gave chloral, followed by almost instantaneous relief in sleep,—the first he has had for four days and three nights. Dose, fifteen grains in syrup and water every two hours, as long as the paroxysm persists. Effect almost magical.

Case II.—J. C., a middle-aged man, of very violent temper. Had a fit of anger last night. Hepatic colic to-day. No relief followed powerful purgatives, anodynes, and sinapisms. Gave fifteen grains of chloral every two hours until relieved. Pain ceased in three hours.

Case III.—Mrs. H., aged sixty-nine years. Underwent operation for the cure of a lacerated perineum at the hands of the late Dr. George C. Blackman, of Cincinnati, Ohio. Operation was unsuccessful. While under treatment she

acquired the habit of taking opiates to induce sleep. Cannot sleep at all now without their influence. Gave fifteen grains of chloral at bedtime, to be repeated at midnight, if necessary. Sleeps much better than with opiates, and is not constipated. Has almost entirely ceased to take opium. Continues the chloral in preference.

Case IV.—Miss A. R., aged twenty-four years, unmarried. Case of confirmed dysmenorrhœa. Gave fifteen grains of chloral, with the effect of relieving the pain almost instantaneously. Repeated the dose only once during this paroxysm.

Case V.—Mrs. R., aged forty-nine years. Mother of preceding. Is subject to spasmodic asthma, and constitutionally intolerant of opium in any shape. Has been treated with almost every drug ever used in this disease, and has never been more than temporarily relieved. One dose of fifteen grains of chloral cuts short an attack, and if taken in time the spasm is entirely warded off.

Case VI.—Mrs. B., primipara. Was delivered of a still child at full term with forceps, and was in danger of puerperal convulsions. Took fifteen grains of chloral at bedtime every night for three weeks. One dose sufficed for a sound night's rest, and she improved rapidly. Experienced no bad effects, although she took medicine twenty-one nights successively.

Case VII.—Mrs. T., aged forty-eight years. Case of dysmenorrhœa which is habitual, and mania a potu which is occasional. Fifteen grains of chloral every two hours until she sleeps. Four doses sufficed to quiet her.

Case VIII.—Mrs. J. G. H., aged thirty-four years. Case of amyloseptic dyspepsia. During digestion of starchy articles of diet she suffers intense pain in the epigastric region. To take fifteen grains of chloral after each meal. Never had a recurrence of pain after second dose, and experienced no inconvenience from drug, although she used it nearly six weeks.

Case IX.—Mrs. A. T. R., aged thirty-seven years. Case of dysmenorrhœa of many years' standing. Has been accustomed to inhale ether for relief at these times. Ordered fifteen grains of chloral to be given every two hours until paroxysm has passed. Takes successive doses for about three days, that being the ordinary duration of her catamenial period. Finds relief more promptly from the chloral than from ether, and no bad or unpleasant results.

Case X.—Mrs. T. J., aged thirty-five years. Has been hysterical for many years. Is very troublesome at such times to her husband and family. One dose of fifteen grains of chloral puts her to sleep.

Case XI.—R. H., aged thirty-three years. Boiler-maker by occupation,—physically powerful and athletic. Periodical drunkard. Case now one of delirium tremens. Gave fifteen grains of chloral, and repeated the dose every two hours until sleep was produced. Sleep relieved him shortly after the sixth dose. Took in all ninety grains of the drug.

Case XII.—J. N., aged twenty-eight years. Case of commencing mania a potu. Fifteen grains of chloral at 3 P.M. Dose repeated at 5 P.M.; slept at 6, and awoke all right next morning.

It will not be necessary to multiply this record, and it is closed by referring the reader to the case of "Modified Variola" treated by me in 1870, and published in the *American Journal of the Medical Sciences* for October, 1871, p. 413. In this case I gave a larger quantity of chloral, and continued its administration during a longer period of time, than in any other case in which I have ever employed it. The dose was but fifteen grains, but it was given night and day for a period of fifty-seven hours,—three hours intervening between the doses,—thus making an amount of two hundred and eighty-five grains consumed by this patient.

I am of the opinion that in chloral we have a very valuable therapeutic agent in many other diseases than those above enumerated, but I have reported only those cases in which I happen to have used the drug in the greatest quantity.

Having finished what was to be said as to the value of chloral, I devote a few words, before concluding, to

some directions as to the doses in which it should be given.

I decidedly incline to the opinion that the dose which I have ordinarily used—namely, fifteen grains—is sufficient to commence with in any case. Of course each case must stand upon its own individual merits; and this idea holds good with regard to every other drug in the Dispensatory. But in ordinary cases, just as experience has shown, for instance, that a dose of one grain of solid opium is sufficient to give its proper effect, I should say fifteen grains of hydrate of chloral is amply sufficient for one dose.

Now, how soon may we repeat this dose with entire safety to the patient, and how often? This, again, will depend upon sleep being induced or not by the first dose; or, if induced, whether it has lasted as long as we desired. On the whole, experience has taught me that the dose of fifteen grains may be safely repeated every two hours for a limited time,—say twelve or twenty-four hours, if its effect be not induced sooner.

Finally, my experience in the use of the medicine under consideration has been so uniformly successful, not having a single disappointment to record, that I feel constrained to say that under no circumstances now known to me would I give a larger dose than that above stated to be my ordinary one.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

CLINIC OF PROF. AGNEW, SEPTEMBER 20, 1871.

Reported by Dr. Elliott Richardson.

ONYCHIA.

AT Prof. Agnew's clinic, held September 20, 1871, two cases of this affection were presented, differing somewhat, but presenting the same indications for treatment.

The first case was that of a youth aged 19 years. He had an ingrowing nail of the great toe, which had produced ulceration of the soft parts in the vicinity of its inner border. The condition was due, in this instance, to the pressure of tight-fitting boots. The professor said the formation of these ulcers was facilitated by the habit of cutting the nails down at the corners, and that those suffering from syphilis or other constitutional disease were also much more liable to affections of this character. In regard to the treatment, the lecturer said the most satisfactory method was to remove the nail completely, and to prevent its subsequent formation by thorough cauterization of the matrix with caustic potassa. Other less radical measures had been recommended: of these, one, which had been sometimes successful, was to cut away the portion of nail impinging upon the ulcer, to pare off the granulations, and then to apply ungt. hydrarg. ox. rub., or other alterative ointment. This method, he said, was much less efficient and satisfactory than the total extirpation of the nail and matrix.

The patient was then etherized and the operation performed. The nail was loosened as much as possible, with the end of the thin handle of a scalpel inserted between it and the matrix. It was then divided in the median line, and the two portions removed with moderate traction. The fold of skin over the base of the nail was divided for a distance of about one-third of an inch, to admit of easy access to the matrix. This tissue was then destroyed by a free application of caustic potassa. A pellet of lint, dipped in oil, was pressed into the wound. This it was directed should be retained for twenty-four hours without any additional dressing. At the expiration of that time a flaxseed poultice would be applied, and continued until the slough should separate, when the granulating ulcer remaining would be dressed with cerat. resinæ.

The other case was that of a woman, aged 40 years, who had a distorted nail, which had grown, according to her

account, after removal of the nail and unsuccessful efforts to destroy its matrix, made a few years ago. Small abscesses had formed at times under this deformed appendage, giving rise to much pain and inconvenience.

The patient was etherized, the nail removed, and the matrix destroyed as in the preceding case.

MORBUS COXARIUS.

On the same day was presented a boy, two years of age, suffering from strumous disease of the hip-joint. The history obtained of the case was that he began to walk at the age of one year, and gave no evidence of ill health until six months afterwards, when it was noticed that he walked lame. This difficulty had since continued to increase, and at the present time he exhibited unmistakable evidences of the disease in its suppurative stage. The buttock was flattened, and the foot advanced and everted. About the great trochanter and for some distance below, the parts were tumid, heightened in color, sensitive to the touch, and gave a sensation of fluctuation.

An abscess had undoubtedly formed in this locality, which, the lecturer said, most probably extended into the joint. Prof. Agnew, in the course of some remarks upon the origin and development of this disease, said that it commences, in a large majority of cases, in the cancellated structure of the head of the femur, whence it extends to the cartilage and the synovial membrane. The joint then becomes the seat of abscess, and the accumulation of fluid inside the capsular ligament distends it, and causes flexion of the thigh upon the abdomen, and eversion of the limb. The capsule is at length penetrated, and the abscess seeks a vent at some point on the surface of the hip or thigh.

The treatment for this disease is of both a constitutional and a local nature. For the former, cod-liver oil, iodide of iron, and other tonics are established remedies; for the latter, rest, and, in the early stages, counter-irritation, either by small blisters, frequently repeated, or the actual cautery.

In this case, as there is no pain or shortening, a binder's board splint was directed to be carefully moulded so as to envelop the buttock and to extend a short distance above the crest of the ilium and downward upon the thigh. This splint was designed to keep the joint at perfect rest, and under this treatment recovery, with ankylosis, would be looked for. It was advised that all pressure upon the foot of the affected side be most carefully avoided.

HYDROCELE.

At the same clinic was also exhibited a case of hydrocele in a child of six years. Five months ago the patient received a fall, shortly after which swelling of the scrotum was observed. This had been tapped four weeks before his presentation at clinic, and once previously. Each time some fluid was drawn off, and hopes were entertained by the physician in charge of the case that permanent recovery would follow without further operation; and, indeed, this is usually all that is necessary for the treatment of hydrocele in one so young; but if failure results, other measures must be adopted.

In the *Medical Times* for October 2, 1871, in the report of Prof. Agnew's clinic, mention is made of a case of hydrocele occurring in a child fourteen months old, following an exhausting illness. In that case a lotion of solution of muriate of ammonia was directed to be applied to the affected part two or three times a day. Under this treatment it was believed that three or four weeks would suffice to produce recovery; but, if such were not the case, a thread would be introduced, and the fluid then drawn off. At the expiration of twenty-four hours the thread would have performed its office and would be removed. The child did not return, and we cannot, therefore, do more than conjecture that the treatment first advised has proved successful.

It is interesting, however, to observe the increasing obstinacy of this affection with advancing age. In early infancy it tends to recovery unaided by surgical means; in childhood, measures serving to produce a moderate degree of inflammation in the tunica vaginalis testis are sufficient; while in adult life the more severe inflammatory condition produced by the injection of pure tincture of iodine alone suffices in a great majority of cases to effect permanent benefit.

In the case before us, Prof. Agnew introduced a needle, threaded with a single thread, through the walls of the sac at the bottom of the scrotum, and brought it out at the upper portion of the tumor. The fluid was then drawn off and the ends of the thread loosely tied together. He said that under no circumstances should the thread be allowed to remain longer than twenty-four or thirty hours. At the expiration of that time sufficient inflammation would be produced in the tunica vaginalis to prevent any return of the hydrocele.

CYSTIC DISEASE OF TESTICLE.

The patient, aged 28 years, presented a swollen condition of the scrotum on the right side, with fluctuation, and an enlargement and induration of the right testicle, which was also elastic and sensitive to the touch.

Examination by the usual test for hydrocele failed to exhibit any translucency of the tumor. Prof. Agnew said that this was not, however, a conclusive evidence of the absence of hydrocele, for the walls are sometimes thickened to a degree which prevents the transmission of light, though the fluid contained may be perfectly transparent, or the fluid itself may be dark. The lecturer said that the duration of the affection and its slow progress contraindicated carcinoma, but he was inclined to believe this to be a case of cystic disease.

A trocar and canula were then introduced and the fluid drawn off. It consisted of serum and blood, quite opaque, and present in considerable quantity.

After the evacuation of the fluid the testicle was more distinctly felt. It was large, extremely painful, with softened portions here and there, and the enlargement was found to extend up the cord. The diagnosis of cystic disease was confirmed. The removal of the diseased gland offered the only hope of recovery.

CORRESPONDENCE.

DR. STEPHEN SMITH'S ARITHMETIC.

TO THE EDITORS OF THE PHILADELPHIA MEDICAL TIMES.

GENTLEMEN,—In the number of the *Philadelphia Medical Times* for December 1, 1871, I observe a communication from Dr. Stephen Smith, in which he quotes, from a review which lately appeared over my initials in the *American Journal of the Medical Sciences*, the following paragraph:

"Comparing the mortality of ankle-joint with that of leg amputations, Dr. Smith finds that in the United States army, during the War of the Rebellion, the death-rates of the operations in question were respectively 13.43 and 26.02 per cent., while in the Confederate service the death-rates were 20 and 27 per cent., and in the British army, during the Crimean war, 18 and 36 per cent. 'From these statistics,' Dr. Smith adds, 'it appears that amputation of [at in the original] the ankle-joint is 50 per cent. less fatal than the alternative amputation through the leg.' We cannot commend the accuracy of this calculation, which, indeed, we are a little surprised to find in the work of a writer who is so much accustomed to statistical investigations as is Dr. Smith. Eighteen per cent. is, indeed, half of, but by no means 50 per cent. less than, 36 per cent.; and the difference in death-rates is obviously not 50 per cent., but 12.6, 18, or 7 per cent., according to the figures derived from the different sources mentioned."

Upon which Dr. Smith remarks:

"The statement in the text was to the effect that the death-rate in ankle-joint and leg amputations in the United States and British armies was in the ratio of one of the former to two of the latter. The 'accuracy of this calculation,' based on these statistics, that ankle-joint amputations were 50 per cent. less fatal than leg amputations, and also the accuracy of the reviewer's calculation, that '18 per cent. is, indeed, half of, but by no means 50 per cent. less than, 36 per cent.' I am quite willing to leave to the decision of the reader."

I have heard, Messrs. Editors, of an eminent professor who, having found, with the poetical schoolboy, that

"Multiplication is vexation,
Division is as bad,"

determined always to calculate averages by the aid of logarithms, so that he might substitute for long division the simpler process of subtraction; but Dr. Stephen Smith's mind is evidently differently constituted, for he insists upon subtracting by the "rule of three."

Before entering upon a consideration of the comparative accuracy of Dr. Smith's and of the reviewer's calculations, permit me, in the first place, to point out distinctly that the "statement in the text" to which exception was taken in the review was simply that "amputation at the ankle-joint is 50 per cent. less fatal than the alternative amputation through the leg" (Surgical Memoirs, U. S. Sanitary Commission, vol. ii. p. 103), repeated a few pages further on (*op. cit.*, p. 106) in the words "ankle-joint amputations are fifty per cent. less fatal than leg amputations," and that the "statement in the text" contained no reference whatever (in words) to the "ratio" borne by the death-rate of one operation to that of the other. Thus much by way of preface, to show that the question at issue is purely one of arithmetic, not one of surgical fact.

Let us see now how Dr. Smith's "new departure" in mathematics—his rule-of-three system of subtraction—applies to some of his other calculations.

Dropping decimals, 18 per cent. is to 36 per cent. in the ratio of one to two; therefore (according to Dr. Smith) it is one-half, or 50 per cent., less.

Similarly (taking the figures of the U. S. Army), 13 per cent. is to 26 per cent. in the ratio of one to two; therefore (still according to Dr. Smith) it is one-half, or 50 per cent., less.

Very good:—in the next section of Dr. Smith's essay (*op. cit.*, p. 103) we find discussed the comparative frequency with which ankle-joint and leg amputations require reamputation; and here the figures are, for the ankle, 12 per cent., and for the leg, 9 per cent. Now, 9 per cent. is to 12 per cent. in the ratio of three to four; therefore (if Dr. Smith's rule be a good one) it is one-fourth, or 25 per cent., less; and yet, on page 106 of his essay, Dr. Smith tells us that the difference is only 3 per cent., which is the result we should have obtained by the old-fashioned method of subtracting 9 from 12.

Does not this show that in his previous declaration, that 18 per cent. was 50 per cent. less than 36 per cent., and that 13 per cent. was 50 per cent. less than 26 per cent., Dr. Smith made a slip of the pen, or, in plainer words, a blunder—and that he has now made the much graver blunder of not acknowledging his mistake when it is pointed out to him?

Allow me to trespass a little further on your space, Messrs. Editors, in order to propound a few short questions in Mental Arithmetic, which (to borrow an expression from Father Tom, when he was about to "make a hare" of the Pope in "theology and the cube-root") let Dr. Stephen Smith "catapomphericate in two shakes" if he can:

1. Does Dr. Smith really believe that the difference between 18 per cent.—or $\frac{18}{100}$ (for it is the same thing)—of a dollar, for instance, and 36 per cent., or $\frac{36}{100}$ of a dollar, is 50 per cent., or $\frac{50}{100}$ of a dollar?

2. Does Dr. Smith really believe that the difference between 18 per cent., or $\frac{18}{100}$, and 36 per cent., or $\frac{36}{100}$, is the same as

the difference between 13 per cent., or $\frac{13}{100}$, and 26 per cent., or $\frac{26}{100}$?

3. If 18 per cent. is 50 per cent. less than 36 per cent., how much less is it than 68 per cent.?

4. If 9 per cent. is only 3 per cent. less than 12 per cent., as skillfully remarked by Dr. Smith (*op. cit.*, p. 106), by what wild flight of the imagination, not to say rule of arithmetic, can 18 per cent. be supposed to be 50 per cent. less than 36 per cent.?

“Ha, ha, ha!—ho, ho, ho!”—says his Riv’rence. ‘Who’s the hare now, your Holiness? Oh, by this and by that, I’ve sacked you clane! Clane and clever I’ve done it, and no mistake!’”

And now, Messrs. Editors, I will be kinder to Dr. Stephen Smith than he seems disposed to be to me, for I will not merely point out the inaccuracy of his calculation and leave it “to the decision of the reader,” but I will show him how he came to make his mistake, and how he may avoid it for the future.

Eighteen per cent. is unquestionably to 36 per cent. in the ratio of one to two, and it is less than 36 per cent. by half, or 50 per cent.—of what?—not of 100 per cent., but of 36 per cent.; that is, is less by $\frac{50}{100} \times \frac{36}{100} = \frac{1800}{10000} = \frac{18}{100}$, or 18 per cent., as was stated in the paragraph which has given Dr. Smith so much trouble. Similarly, the difference between 13 per cent. and 26 per cent. is $\frac{50}{100} \times \frac{26}{100} = \frac{1300}{10000} = \frac{13}{100}$, or 13 per cent.; and the difference between 9 per cent. and 12 per cent. is $\frac{25}{100} \times \frac{12}{100} = \frac{300}{10000} = \frac{3}{100}$, or 3 per cent., as Dr. Smith has himself declared.

I am, etc.,

JOHN ASHHURST, JR.

PHILADELPHIA, December 5, 1871.

TO THE EDITORS OF THE PHILADELPHIA MEDICAL TIMES.

GENTLEMEN,—I find in the *Philadelphia Medical Times*, vol. ii. No. 27, p. 58, an article whose caption is “The Treatment of Smallpox,” from which I quote as follows: “Dr. Alexander Collie, the resident medical officer at the Homerton Fever Hospital, says that treatment in the mild variety of variola is unnecessary, and in the black smallpox useless. In the confluent form, however, treatment is of the greatest importance, and the result of the case will sometimes be determined by it. . . . He should be allowed a highly nutritious diet, consisting of milk, beef-tea, eggs beaten up with whiskey, tapioca,” etc.

As the notice given to Dr. Collie’s treatment for confluent variola has the air of the writer’s regarding the treatment as *something new* in the management of variola, especially in its confluent form, I desire to say, through the *Times*, that as far back as 1856, in the “Transactions of the Pennsylvania State Medical Society,” and in 1857, in a paper which I read before the Philadelphia County Medical Society, and which was published in 1862 and liberally distributed among the profession and medical journals, and in a paper entitled “SMALLPOX, ITS PATHOLOGY AND TREATMENT,” which was read before the American Medical Association, and which was ordered to be printed, and may be found in vol. xvi. p. 279 of the Transactions of the Association, I recommended a treatment identical with that proposed by Dr. Collie. The last paper was subsequently printed in pamphlet form, and I herewith have the honor to send you a copy of it.

Any of the papers to which I have referred will show you

that I have presented, and endeavored by facts and argument to sustain, a pathology of smallpox,—may I be indulged in saying, the *true pathology* of that dreadful disease, which is the very opposite of the pathology usually regarded as correct; and that my treatment is in perfect harmony with my pathology, and that the results of the treatment, as indicated by the statistics, verify its correctness and high value.

So positive is the *nutritive character* of my treatment, which should commence in the confluent and semi-confluent forms, in which “quarts of pus are generated,”* at the vesicular stage of the disease, and continue through the miscalled secondary fever without any abatement, and be pursued until the patient is fully convalescent, that many quarts of milk, dozens of eggs, and pints of whiskey are taken by the unfortunate sufferer. So very useful a part does *high nutrition* play in the treatment of confluent and semi-confluent smallpox, combating the waste and drain upon the patient because of the large amount of pus developed and the vast sum of tissue to be reproduced, that I have called it “*the compensative nutritive treatment for smallpox.*”

May I ask a place in the *Times* for this communication?

Very respectfully,

A. NEBINGER, M.D.

PHILADELPHIA.

UNDULINA RANORUM.—Dr. E. Kay Lankester (*Quarterly Jour. Micr. Science*, October, 1871) thus names a new infusorial parasite which he has discovered in the blood of frogs. He at first took it for a very active white blood-corpuscle, but was enabled to kill the little creature by a small quantity of acetic acid vapor and then to make out its structure. “It was seen to be a minute pyriform sac, with the narrower end bent round on itself somewhat spirally, and the broader end spread out into a thin membrane, which exhibited four or five folds and was produced on one side into a very long flagellum. The wall of the sac was striated coarsely as in opalina; and the direction of the striae on the two sides of the sac, as seen through the other, showed that the small end of the sac was twisted as well as bent over on itself. A pale, clear nucleus and a very few granules were also seen. In life the broad membrane undulates vigorously in a series of waves, the flagellum taking part, and presents then a deeply-toothed appearance. The movements produced by the activity of this membrane tend to urge the animal in a wide circle. The opposite extremity of the sac twists and untwists itself to a small extent also during life. The series of waves of the undulating membrane are not incessantly in one direction; after a certain time they change to the opposite direction, and then resume their original direction, an alternation of from right to left and from left to right being kept up.” In the blood of one frog—where these parasites are not infrequent, as many as five or six being contained in a single drop—he noticed very numerous minute oblong bodies, which reminded him of pseudo-naviculæ which he has found in the cysts of the Gregarina parasitica or Tubifex rivulorum. These little oblong bodies were in many cases attached to the end of the red blood-corpuscles, just as he has seen the similarly sharply terminated pseudo-naviculæ of tubifex attached to pieces of tissue-fibre by the penetration of their points into such foreign substances. It seems not improbable from their association that these oblong bodies may be connected genetically with the little infusorial parasite.

GOITRE PRODUCED BY THE USE OF IRON.—Like M. Saint-Lager, Dr. Seitz (*L’Union Médicale*, Nov. 7; from *Med. Central Zeitung*, December, 1870) has become convinced that the use of iron will cause goitre in a certain number of individuals. In a case which he reports, a preparation of iron was administered for epistaxis, with the effect of producing enlargement of the thyroid gland, which disappeared when it was replaced by the iodide of potassium.

* Watson’s Practice, article “Smallpox.”

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EDITORIAL.

THE MASSACHUSETTS MEDICAL SOCIETY.

OUR readers will remember that at the meeting of the American Medical Association held in Washington, May 3, 1870, objection was made to the reception of the delegates of the Massachusetts Medical Society on the ground that it "voluntarily and improperly furnishes shelter and gives countenance to irregular practitioners to such an extent as to render it unworthy of representation in the General Assembly of American Physicians." It appears from the answer to these charges, which the Society has prepared, that it does in fact contain among its members several practitioners of homœopathy who were elected before they had become converted—to use the current phrase—to the doctrines of Hahnemann, and who, although taking little or no part in the proceedings of the Society, have not chosen to resign. In consequence of the action of the American Medical Association, the Massachusetts Medical Society passed the following preamble and resolutions:

"Whereas the Massachusetts Medical Society has always endeavored to make, as its charter emphatically enjoins, 'a just discrimination between such as are duly educated and properly qualified for the duties of their profession, and those who may ignorantly and wickedly administer medicine,' while at the same time it has ever acted in accordance with the 'liberal principles' of its foundation, and shown itself ready to examine and to adopt every suggestion, from whatever source, promising improvement in the knowledge and treatment of disease;

"And whereas it is alleged that some of its fellows, in opposition to the spirit and intent of its organization, consort, in other societies and elsewhere, with those whose acts tend 'to disorganize or to destroy' the society;

"Therefore, Resolved, That if any fellow of the Massachusetts Medical Society shall be or shall become a member of any society which adopts as its principle in the treatment of disease any exclusive theory or dogma (as, for example, those specified in Art. 1 of the by-laws of this society), or himself shall practise or profess to practise, or shall aid or abet any person or persons practising or professing to practise, according to any such theory or dogma, he shall be deemed to have violated the by-laws of the Massachusetts Medical Society by 'conduct unbecoming and unworthy an honorable physician and member of this society.' By-laws, VII. sec. 5.

"Resolved, In case the society concur with the councillors in the foregoing resolution, that the president of the society shall appoint a committee of five fellows (to hold office one year and until others are appointed) to bring before a board for trial any fellow who, three months from this date or after, shall be found chargeable with the offence set forth in the foregoing resolution.

"Resolved, That, after concurrence by the society, the foregoing preamble and resolutions shall be printed, and a copy sent to every fellow of the Massachusetts Medical Society."

A committee, of which Dr. Luther Parks is chairman, having been appointed to prefer charges as provided for in the above resolutions, and the three-months limitation having expired, the charges of unbecoming conduct were duly made.

The questions naturally arise, why were not these or similar resolutions passed earlier, and why was action taken in the matter only when it was forced upon the Society by the Association? The officers of the former appear, however, to have had a forecast of what would result from such action. The Massachusetts Medical Society is an institution chartered by the State, and owning property in which every member has a vested interest, and can therefore exercise only such authority as is conferred upon it by the *laws of the State*, and is bound by all the obligations which the laws impose upon it, touching which powers and obligations the regular tribunals and not itself are the judges. The Society was founded at a time when homœopathy was not dreamt of as a possible delusion, and of course contains nothing in its charter which would enable it to expel homœopaths. It is therefore quite practicable for a person to attain the amount of knowledge required by law to pass the requisite examination, thus to establish his legal right to admission as a fellow of said Society, and afterwards to engage in the practice of medicine according to some exclusive dogma, such as homœopathy, without rendering himself liable to expulsion; and no by-law can be passed which will remedy this evil.

It was thought best, therefore, to take such precautions as would prevent the further admission of homœopaths, but to allow those already members to remain undisturbed, more especially as they were in such a minority as to be without influence on the legislation of the Society, rather than, by attempting to turn them out, to excite controversy and litigation. Exactly what was expected has taken place; for no sooner were the committee ready to proceed to trial than an injunction was served upon them restraining the Society from any decision which would expel from the organization any one of the members charged with improper conduct. Although it is thought that this injunction does not prevent the investigation from going forward and a decision of guilty or innocent being given, still it has virtually stopped the proceedings, and the homœopaths have gained for themselves that which they covet beyond all other things,—notoriety. Some of the secular journals, not only in Boston, but also here, have warmly espoused their cause, and have shown much ignorance

of the whole question and great unfairness towards the regular profession, which is held up to ridicule simply for maintaining, without fear and without prejudice, what it believes to be the right. It is difficult to understand how any one who has joined a medical organization can, if he retain a vestige of self-respect, remain a member of it after having become a homœopath; for he knows that in the eyes of his associates his *conversion* constitutes conduct unbecoming and unworthy an honorable physician; moreover, being excluded from the good fellowship which should prevail among the members of a society, and which, by the way, no process of law can ever compel them to share with him, he is cut off from many of its advantages, and must find his position, to say the least, an uncomfortable one. We can see nothing to admire in one who refuses to be judged by those with whom he has voluntarily associated himself, and to be governed by by-laws which he has promised to obey and to respect.

A newspaper, which a friend has sent us, contains an account of interviews between an irrepressible reporter and several of the homœopathic practitioners who are now upon trial. If one thing more than another has seemed uppermost in the minds of the latter, it is that pecuniarily speaking the agitation of the matter is likely to be of service to them, one going so far as to say, "It gives us gratuitous advertising." Another has hopelessly contradicted himself, for at one breath he says, "This whole agitation is really a battery of Quaker guns posted to prevent young graduates from going into the new practice," and in the next, that "The wiser and older members of the old society have little to say against our system, and advise letting us alone; it is the younger members who are instigators of this present movement, hoping to get notoriety and reputation by scandalizing us, as some older ones did in the past."

There is, in fact, no bigotry or intolerance in the recent action of the Massachusetts Society; and since the homœopathic members are, by their own showing, not likely to suffer by it, we fail to see how they have been harshly treated, and in what way they have merited the crown of martyrdom with which friendly editors are adorning them. Membership in the Society is not a prerequisite to entering upon a medical career in Boston, and expulsion from it is not of necessity followed by the loss of practice, and it certainly involves a stretch of the imagination to look upon the latter as an oppressive measure to prevent any one from practising medicine as his interests may dictate. It is, we think, not venturing too much to say that the homœopaths have been waiting patiently for this "gratuitous advertising." Hoping for and expecting this, they have, without deriving any benefit from the Society or taking part in its proceedings, paid their annual dues and meekly suffered slights and contumely through long years; and, apparently because they have disregarded obligations which every honorable man considers sacred, they are now approvingly patted on the back by a deluded public.

LEADING ARTICLES.

OLD-TIME EPIDEMICS.

THE most inveterate stickler for the superiority of the days of old over the degenerate times in which we live would have his faith materially shaken by a disinterested study of the history of the various epidemics which have from time to time afflicted mankind. In the earliest ages, and even up to this date, these have been supposed to be just visitations upon human depravity by the hand of the Almighty; but it would be illogical to reason that the moderately-destructive epidemics of recent days have been graduated to a more elevated tone of public morals. Certain it is that the terrible diseases with which the world was scourged in olden times have been handed down to us by tradition as models of vehemence and intensity in their symptoms, and of assured fatality in their results, which are not characteristic of a single epidemic, no matter how violent, in more modern times. Much of this successful mitigation of malignant diseases is probably due to improved methods of treatment and to a more general observance of hygienic laws; but, unlike other things, which seen at a distance seem diminished to the eye of the observer, the most ancient epidemics loom up in magnificent dimensions, and in virulence overshadow all the later pestilences that have disturbed the sanitary equilibrium of communities.

It was no uncommon circumstance in those days, if we can believe the records, for whole masses of the people,—at least ten thousand "at one fell swoop"—to be stricken down by their devastations, and this, too, after a most extraordinary complication of symptoms. All kinds of putrid, malignant, and spotted fevers prevailed, and many of those attacked died almost instantaneously, or lingered for several days through watery, bilious, and stranguous fluxes, venomous apostemes, phrenzies, spurious parotids, imposthumes, pituitous tumors, defluxions, and a score of other symptoms which, though quaintly named, were overwhelming in their gravity. An epidemic of only moderate intensity is sufficient nowadays to affect the serenity of hundreds of thousands of people; but how great would be the sensation should the plagues which visited European cities and districts of country in previous centuries, and carried off thousands upon thousands of the population, find a counterpart of their virulence in this or any other portion of the globe!

The remedies gravely suggested to combat these epidemics seem to us, in these later days of intelligence, to be beneath the level of old women's recipes and charlatans' panaceas. It is no wonder that pestilences became unmanageable when, as in the plague of 1347, such vile and unmeaning compounds were administered as a decoction of rue, angelica, roots of reeds, roots of brambles, peaches, and roses, all combined together, with the addition of goat's horn and mule's hoof; or a powder composed of brans, beans, wheat, rye, millet, cockle-shells, and roasted brains of a goat,

in goat's milk. Even burnt bees, old shoes, powder of lizards, sparrows, and calcined powder of hens, crows, blackbirds, and dog-bones were employed during the progress of the epidemic. We are told, with all the positiveness of the utmost credulity, that the preventive, *par excellence*, which cured all that used it, was compounded of nitre, sulphur, borax, vitriol, alum, powdered gold, silver, brass, assafoetida, goat's excrement, crude mercury, vinegar, and rose-water, made into an infusion, boiled, dried, and powdered,—a drachm of this delectable mixture to be taken every morning. A century later, which an old writer describes as "a most tragical time of great destruction," the world had grown no wiser, for we find bezoardics, as they were called, prescribed, in which the most incongruous ingredients were administered to delicate stomachs. In epidemic smallpox, for instance, accompanied with peripneumony, hæmoptysis, and other alarming lung-symptoms, the virtues of a decoction were highly extolled, in which were massed together flowers of Turkey wheat, leaves of the cuckoo-plant, flowers of beans, honeysuckle, marigold, primrose, red poppies, chicory, prunes, lentils, Jerusalem oak, lungwort, nettles, cucumber-seed, and barley boiled in water or chicken-broth; while the diet consisted, among other things, of water distilled from a hen or capon, mashed—bones and all—with pearls, corals, precious stones, etc.

These are but trifling specimens of the hundred and one odd and fanciful articles that were for centuries both externally and internally prescribed as prophylactic and curative agents in the trying times of terrible epidemics. We of the present day, who have been educated to a higher standard of pharmaceutical refinement, would almost prefer to die from the disease under modern treatment than to recover under the disgusting load of mingled drugs and animal and vegetable refuse matter inflicted upon our unfortunate ancestors. The remedies suggested remind us forcibly of the contents of a sorcerer's caldron, whose qualities for good or evil were only to be developed by stirring and mingling, and mingling and stirring *ad nauseam*; and we can almost conjure up a picture of the apothecaries and practitioners of those days dancing around the seething caldron, like the weird sisters in Macbeth. The treatment of wide-spread malignant diseases noticeably improved, however, from this time forward, and the commencement of each new century witnessed the expunging from the armamentarium of the profession of many of the roots and herbs and animal products which had done little or no service in the cause of medical practice, though steadily resorted to in every emergency in which nothing better seemed to be indicated. As years roll by, and medical men become thoroughly convinced that a treatment founded on correct principles is of more vital importance than a mere routine adhesion to special drugs, we may hope for a further weeding out of the long list of agents, many of which occupy a corner of the apothecary's shelf, from which they are scarcely disturbed from the time of one revision of a Pharmacopœia to another. R. J. D.

TRANSLATIONS.

CONTRIBUTION TO THE PHYSIOLOGY OF CILIATED CELLS.

BY DR. LUDWIG LETZERICH,
of Braunsfels.

Translated from the German by W. C. Kroman, M.D., of Baltimore, Maryland.

THE office of the cells which clothe the mucous membrane of the respiratory organs is not alone that of protecting the mucous membrane, but they especially preside over secretion. At present I will only treat of the anatomical structure and the physiology of the ciliated cells, but in a future work I intend to present the physiology of the cylindrical cells of the intestinal canal and that of the pavement epithelium.

If we allow small bits of the mucous membrane of the larynx or of the trachea to remain in Schultzze's iodised serum for twenty-four hours, and after this place them for another twenty-four hours in very dilute (about $\frac{1}{10}$ per cent.) chromic acid, after teasing out small fragments of the mucous membrane, under the microscope we see that the ciliated cells are provided at their bases with several processes. Furthermore, we very frequently see, and especially upon perfectly isolated specimens, that the processes of the ciliated cells stand in direct connection with connective-tissue cells. The length of these processes is very various, and the same obtains of their thickness. Towards the lumen of the larynx and the trachea, the ciliated cells, as is known, have a basal edge beset with cilia. Their nuclei are of a roundish, elliptical shape, and have tolerably large, dull-shining nucleoli. Their membrane is very delicate, the protoplasm slightly clouded, and it here and there contains small granules (rabbit, cat). On attentively observing isolated cells provided with processes, we see in them one or more dull-shining, round globules, which exist at one time at the base, then again in the centre, at other times at their upper end. They have the same form, the same physical constitution, as those which exist in the mucus upon the surface of the mucous membranes named. These globules, which I will name mucous or lymphoid cells, are not formed in the ciliated epithelium, but their places of formation are the connective-tissue cells, which stand in direct connection by means of processes with the epithelial cells. This is very distinctly seen in preparations well isolated. The lymphoid cells migrate from the places of their formation, the connective-tissue cells of the mucous membrane, and where they are still small, through the processes, ever becoming larger, towards the epithelial cells; in the latter they mount towards the ciliated basal edge and perforate it, in order to pass out with a portion of the cell-contents into the lumen of the larynx and trachea. The act of perforation may be best seen in its different stages in thin sections of mucous membrane which have been hardened for thirty-six hours in a dilute solution of chromic acid ($\frac{1}{10}$ per cent.) or in dilute alcohol; and after carefully teasing out these sections, it is seen to be accomplished in the following manner. The lymphoid cells, having arrived at the basal edge, push firmly against it, and in consequence of the close pressure they cause a crescentic, slight indentation of the inner surface of the soft membrane. The lymphoid cells become somewhat pointed, at the same time bore an opening in the basal edge of the epithelial cells, and, at one time assuming an elongated, pointed form, at another an elongated form constricted in the middle (*bisquitförmige*), they force themselves through the soft, sarcoid-like basal membrane. After their exit, the lymphoid cells again assume at once their round form.

From what has been stated, it follows that the ciliated cells present more complicated structures than has been hitherto supposed. The same is true also of the cylindrical cells of the intestinal canal. In both kinds of epithelium there are processes which are connected with connective-tissue cells. In the latter the lymphoid cells are developed, which migrate through the processes into the epithelium, mount up in these, and in consequence of their pressure against the soft basal membrane there produce openings and thus arrive at the free surface of the mucous membrane together with the greater part of the cell-contents. The question here may well be, What forces are in action which cause the migration of the lymphoid cells? Of course it is not possible for me to give a direct answer to this. However, we may with great probability assume that the connective-tissue cells, with which the epithelial cells are connected, communicate with a system of lymphatics, or, better, of nutrient canals, which passes over directly into blood-capillaries; in other words, that the connective-tissue cells communicate with the ends of the capillaries, only conveying the serum of the blood. We have therefore to adduce the blood-pressure as the motive power for the migration of the lymphoid cells. This assumption becomes a certainty by the observation of pathological phenomena, as we will see hereafter. The function of the epithelial cells of the larynx and trachea consists in an activity specially secretory. The lymphoid cells, which by their pressure against the soft basal membrane effect an opening of the epithelial cells, appear to be of great importance for the production of the secretion. The pressure exerted upon the fluid, that is, upon the protoplasm of the cells, probably does not suffice for the exit of the cell-contents upon the free surface of the mucous membrane, and certainly on that account the lymphoid cells are principally intended to open the epithelial cells in a mechanical way.

The openings which are produced in the basal membrane, as a rule, close again rapidly; yet it happens that here and there, especially in hardening bits of mucous membrane in chromic acid or alcohol, such newly-formed openings may be seen as gaps more or less round. The nuclei of the epithelial cells do not participate in the exit of the lymphoid cells and of the cell-fluid. They remain in the cells, and are held firm by means of a tough mass of protoplasm, which cements the nucleus to the cell-membrane, as I have very frequently seen in empty ciliated cells.

The function of the cilia upon the epithelium is known, and I have nothing new to add concerning it.

The physiological secretory process just described experiences considerable modification when circulatory disturbances arise in the mucous membrane. If we lay bare the upper part of the trachea of a young, half-grown rabbit, fix the same over a hollow sound, and for a half-hour repeatedly apply a dossil of cotton saturated with ether to the trachea, protected by tinfoil,—that is to say, produce cold by evaporation,—at the beginning we see the trachea assume a pale color, which soon disappears and gives way to a more or less considerable redness. If we examine, in albumen, recent microscopic sections of the mucous membrane, removed twenty-four hours later, we shall see, besides a decided capillary injection of the mucous membrane, large amounts of lymphoid cells, as well in the epithelial cells as also upon the free surface of the mucous membrane. We can also perceive the most various stages of the penetration of the lymphoid cells through the basal membrane. Besides the immense development of lymphoid cells in the connective tissue of the mucous membrane and their more rapid migration through the ciliated epithelium, there is a considerably increased pouring-out of fluid, which at this high degree of the exudation more or less injures the movement of the cilia.

In consequence of an increased supply of blood to a portion of the mucous membrane of the upper part of the trachea in this experiment, there was an increased development of lymphoid cells in the connective tissue and a more rapid migration of them through the ciliated epithelium. At the same time transudation of fluid, likewise increased, took place (fluid exudation).

UPON EXUDATION AND FORMATION OF PUS (CROUP AND DIPHTHERITIS).

I have for some years past occupied myself with the investigation of croupous exudations, and, where practicable, with the investigation of the mucous membrane covered with exudation after the fatal issue of croup.

In croup also we are dealing especially with an uncommonly increased activity of the connective-tissue cells standing in connection with the ciliated cells. If we make thin sections through fragments of the mucous membrane of the larynx or trachea (covered with the croupous exudation and hardened in chromic acid and bichromate of potassa),* we see an immense new formation of small cells in the connective tissue upon which the epithelium is placed, and with which it is connected by processes. At many places these cells lie together group-wise, but commonly their development takes place in more uniform distribution. We often see the ciliated epithelium actually stuffed full with the cells, so that in sections less thin and in superficial observation the appearance is as though the mucous membrane was deprived of its epithelium. The basal membranes of the cells are often immensely developed, and everywhere in this clear edge we see, penetrating cells and flowing out, coagulable, slightly granulated masses of exudation. The croupous exudation is stratified, because the cells contained in it are cast out with tolerable uniformity with the coagulable fluid and in rapid succession. The cilia of the epithelium disappear as soon as the formation of the exudation begins. The first coagulating layer of the exudation is felted with the cilia, which are torn off by the subsequent exudation. During the croupous process the epithelial cells themselves are often considerably enlarged; nay, it happens that individual processes of the cells dilate to almost the size of the cells. The empty, inactive cells existing in the epithelial stratum are narrow and clear.

The lymphoid cells, which are developed during the purely physiological process of secretion, and migrate through the epithelial cells, as also those which are found here only more abundantly after slight inflammatory irritations (for example, in false croup, catarrhal laryngitis), are essentially different from those cells which are developed in genuine croup and likewise migrate through the epithelium. For, while the lymphoid cells have a clear, dull-shining, rarely slightly granulated protoplasm, the cells in croup are pus-like. The protoplasm of the latter is clouded, and conceals more or less large granules in itself, looking like dark points. In croup, therefore, we are dealing with a new cell-formation (formation of pus), whose elements (pus-cells) pass through the epithelium to the free surface of the mucous membrane, with a considerable coagulable exudation derived from the serum of the blood. In many cases, with lesions having occurred in the tissue of the mucous membrane, I saw the cellular elements of the blood (red and white blood-cells) pass out in the same way to the surface of the epithelium. This is a proof that the connective-tissue cells, with which the ciliated epithelium is connected

* A mixture consisting of two drops of concentrated chromic acid with 45 grammes of distilled water, and the addition of 2.5 grammes of a ten-per-cent. solution of bichromate of potash.

by processes, communicate with a system of nutrient canals which is itself in connection with capillaries.

According to all my observations, croup is of an inflammatory origin.

If we compare the above-described mode of exudation in croup with that in diphtheritis, we are struck by the great difference, especially in the development of the pathologico-anatomical process. The croupous process of exudation is the result of certain inflammatory processes in the upper layers of the connective tissue of the mucous membrane of the larynx and trachea.

Since the cells of this connective tissue are, on the one hand, in direct anatomical connection with the epithelium, and, on the other, are in very probable—nay, certain—connection with a system of canals conveying serum of the blood, the products of inflammation can pass through the epithelium to the free surface of the mucous membranes in question.

In diphtheritis, the cause of the affection of the mucous membrane is a fungus penetrating from without inwards, which either destroys the epithelial cells or excavates in large sloughs, and now gives occasion to the diphtheritic exudation, in consequence of its penetration into the tissue of the mucous membrane. Hence it also comes that, according to the seat of the diphtheritic disease, the exudation varies microscopically and macroscopically. Upon those mucous membranes which are provided with a smooth, stratified epithelium (cavities of the mouth, nose, fauces, and the vagina) the exudation, as a rule, is firm, compact. Upon thin microscopic sections we see the exceedingly irregularly distributed mass of exudation permeated by corroded or also well-preserved epithelial cells, and by a greater or less quantity of pus-cells. Places occur in which conglomerations of pus-cells lie, and places where there is only an amorphous exudation. At those places where the diphtheritic exudation was intimately connected with the mucous membrane, and was felt with it, we find enormous masses of articulated thallus-fibrils, which are numerous ramified.

Upon mucous membranes which are covered with ciliated or cylindrical epithelium (larynx, upper part of trachea, intestinal canal) the diphtheritic exudation has a more cream-like, soft consistency, so that it can be easily scraped off by means of the back of a knife or the forceps. Herewith the epithelial cells are perfectly corroded, and portions of the exudation appear under the microscope like a mass of débris penetrated by a sod of fungi.

It occurs with uncommon frequency that diphtheritis and croup are developed side by side, and uniformly pass over into each other, moreover, without the two diseases being identical. It is very rarely that croup is developed in diphtheritis of the nasal, oral, or even faucial cavity. Frequently, however, nay, almost always, croup arises in the lower parts of the laryngeal mucous membrane and in the trachea, in diphtheritis of the under surface of the epiglottis and the upper part of the laryngeal mucous membrane, situated above the vocal cords. In most cases diphtheritis of the fauces already exists before the fungus penetrates into the mucous membrane of the upper part of the larynx. As a rule, the process passes over from the fauces or the tonsils into the larynx. I have seen the mucous membrane of the entrance of the larynx so much corroded and destroyed by the fungus, that upon scraping off the soft mass of exudation the deeper layers of the connective-tissue of the mucous membrane were laid bare and were in shreds. The parasite penetrated through the tissues between the different cartilages of the larynx, and were even visible in the external muscles of the larynx. That in consequence of so considerable a diffusion of the diphtheritic fungus, and with the irritation produced by it in the connective tissue of the

mucous membrane, intense inflammations arise, which being communicated to the trachea there cause the development of croup, is one of the facts observed by me in many cases. Croup has consequently been produced by the communicated inflammatory irritation which the diphtheritic disease effected, but it constitutes an independent disease, proceeding *pari passu* with the diphtheritis. I strenuously maintain this fact, in opposition to the views of Hartmann.* In post-mortem examinations of children who have died of laryngeal diphtheritis, I have had the opportunity of seeing that both of these forms of disease existed side by side. The mucous membrane of the entrance of the larynx, in one case (examined ten hours after death), was completely destroyed by the fungus, while the mucous membrane of the portion situated below the vocal cords was scarcely deprived of its epithelium, and was covered by a thin, cream-like layer of diphtheritic exudation. The tracheal mucous membrane, on the other hand, from its commencement to its bifurcation, was coated by a uniform croupous exudation, which could be tolerably easily removed, like an inserted tube. Upon investigating the exudation, no kinds of fungus-formations could be recognized, but a more or less regular stratification of the exudation, with imbedded pus-cells, etc., could be observed. The mucous membrane of the trachea, from its upper to its lower end, retained its epithelium, it is true, filled with pus-like cells, and the basal edge deprived of cilia, as occurs in simple, genuine croup. In this child death ensued from collapse, which was brought about by the transfer of the fragments of fungi into the blood, and the accumulation and multiplication of the fungus in interior organs, especially in the kidneys and spleen.†

Besides the different clinical pictures, and the varying course of both diseases, the development of the pathologico-anatomical processes is far different in croup and diphtheritis.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY, NOVEMBER 9, 1871.

THE PRESIDENT, DR. J. H. HUTCHINSON, in the chair.

DR. WILLIAM PEPPER presented a specimen of *papillary growth of the bladder*, and gave the following account of the case:

The patient was a large and vigorous laboring-man, aged 38 years, of temperate habits, who for a number of months was subject to occasional severe attacks of hæmaturia. The attacks could not be traced to any exciting cause, though he himself attributed them to the heavy lifting he was compelled to do in pursuit of his occupation. There were never any symptoms of renal or vesical calculus. The attacks usually lasted for several days, and recurred every few months. The hemorrhage was free, the blood being dark and mixed with clots. During the intervals the urine was quite healthy. His general health did not suffer materially until towards the close of the case. Treatment by peracetate of iron internally, and suppositories of tannin and opium, seemed to check the bleeding. On October 29, after an interval of the ordinary length, hemorrhage recurred, and continued, despite all remedial efforts, until November 8, when death took place. The bleeding was very profuse, and soon induced extreme prostration, the pulse being feeble and small, respiration sus-

* Dr. Franz Hartmann, On Croup and Diphtheritis of the Fauces. Formation of Exudation and Pus. *Virchow's Archives*, vol. lii. No. 2.
† Experiments upon this—Letzerich, Diphtheritis and Diphtheria, *Virchow's Archives*, vol. lii. No. 2.

pirious, stomach non-retentive, and the surface pallid and sallow.

The autopsy revealed extraordinary anæmia of all the tissues, but no organic disease excepting in the urinary bladder. This viscus was large and distended with florid blood-clots. The walls were thin and everywhere healthy, save over a spot of about one and a half inches in diameter, near the fundus of the bladder, which presented a soft fungous growth about the size of half a walnut. The color of this tumor was pinkish, and it was evidently highly vascular. Its structure was very soft and readily broken down.

The specimen was referred to the Committee on Morbid Growths, who reported as follows:

"The bladder presented by Dr. Pepper exhibited at the base of the trigonum, near the orifice of one of the arches, a papillary growth, which, when floated out in water, had a fine dendritic appearance. The finer papillæ were formed by a crop of capillary vessels, covered by several layers of cylindrical epithelium. It appears, therefore, a benign papillary growth."

Dr. J. E. MEARS presented a specimen of *multilocular ovarian cyst*, removed from Mrs. S., æt. 27. Her menses appeared at fourteen years of age, since when she has always been regular. She was married at twenty-one years, and has had one child, now five years old. In January, 1868, she was seized with intense pain in the right side. In a few weeks she had another attack of pain, accompanied by fever, and after this attack she felt a lump in the right side as large as her fist. In January, 1869, she said that she "caught cold in the lump," and it began to grow. On October 4, 1871, Dr. W. L. Atlee performed ovariectomy, removing the cyst, which contained sixty-five pints of fluid. The measurement of the abdomen at the umbilicus was fifty-one inches. The patient recovered.

Dr. J. M. BARTON presented a specimen of *recurrent round-celled sarcoma of the lower jaw*, removed from Frank R., æt. 27.

The tumor began growing in May of this year, and when first removed, the last of June, was as large as a walnut, and was situated over the lower jaw, midway between the angle and symphysis. It returned immediately, and two months after the first operation was as large as at first, and occupied the same situation, the line of incision from the previous operation crossing the centre of the tumor. It was removed by Prof. Gross at that time, and found to be a round-celled sarcoma. The wound healed kindly, and the man returned home.

On November 8, 1871, he presented himself at the Clinic of the Jefferson Medical College (two and a half months after the last and but four and a half after the first operation) with a tumor occupying the parotid region, differing from the former growth in having the skin discolored over it. It had contracted strong adhesions to the skin and surrounding tissues, and was removed with difficulty, requiring close dissection.

In its general appearance it presents the same characters as the former growth, but has not as yet been submitted to microscopic examination.

The specimen was referred to the Committee on Morbid Growths, who reported it a rapidly-growing round-celled sarcoma.

Dr. GEORGE C. HARLAN presented the specimens from two cases of *malignant disease of the ear*, with the following history:

A little girl, three years of age, was brought to the Dispensary of the Children's Hospital by her mother, from whom the following very imperfect history of her case was obtained: One year ago she had scarlet fever, and had never been in perfect health since. Attention was not called to the ear in any way at the time, or until a few weeks since. Three months ago she became restless and seemed in pain, and two months ago a slight discharge of blood from the meatus was noticed for the first time. Two or three weeks ago there was some pain in swallowing; the parts about the ear were swollen, and her face was drawn to the right side when she cried.

When brought to the hospital, there was a fluctuating swelling beneath and behind the left auricle, and in the external meatus a thick purulent discharge and a large, quite firm, rounded polypus, the size of a pea, or larger.

Under ether, the polypus was removed by the snare and forceps, and an incision was made into the external swelling. From the latter there was a copious discharge of offensive pus. No dead bone could be detected by the probe. Considerable relief followed the operation. The incision had a strong tendency to close at first, and could be kept open only by a tent, the discharge still continuing. In about two weeks, however, the wound gaped, and a fungous growth appeared in it, which continued to increase until it reached its present size. The polypus rapidly re-formed, but seemed to become strangulated by pressure on the external meatus, and sloughed away. The removal of the polypus was not followed by free bleeding; there was several times a slight, but never a profuse, hemorrhage from the tumor. The child died of exhaustion about eight weeks after it was first brought to the hospital. No post-mortem examination was permitted beyond the mere removal of the tumor. Extensive erosion of the temporal bone could be felt by the finger introduced in the wound; but it is impossible to say exactly what parts of the bone it involved.

The specimen was referred to the Committee on Morbid Growths, who reported it a round-celled sarcoma, with a network of bundles of spindle-celled connective tissue pervading it at irregular intervals in various directions.

The interest of the second case is much diminished by the loss of the history and notes, and of the record of the post-mortem examination, Dr. Harlan being absent from the city when it was made. The specimen presented a very extensive destruction of the ear and a great part of the temporal bone by malignant disease.

The patient, a woman about fifty-five years of age, applied for relief from a swelling behind the right ear, nearly the size and much the shape of half a hen's-egg. It had so much the appearance of an abscess with very thick and tense walls that two free incisions had been made in it by a surgeon. These had gaped widely, and fungous granulations were springing from them. They soon assumed the character of foul-looking, sloughing ulcers, with a sanious offensive discharge and rapidly increasing in depth. An opening, through which the discharge flowed profusely, was formed into the external meatus, and extended until the auricle was almost dissected off. As the disease progressed inwards, the portio dura was involved, and the right side of the face was completely paralyzed. After several months of intense suffering, death resulted from direct extension of the disease to the brain.

Nearly the whole of the mastoid portion and a part of the petrous and squamous portions of the temporal bone, the wall of the external meatus, and the angle of the parietal bone were destroyed. The tympanum was laid open by the destruction of its membrane and a part of its upper wall, and the malleus is seen in situ apparently uninjured. There was an opening in the mastoid region an inch in diameter entirely through the bone, over the lower half of it. The dura mater remained intact, and on this account the lateral sinus had escaped. When we consider the great extent and rapid progress of the disease, and the close proximity of the lateral sinus, internal jugular, and carotid, it seems singular that there was no considerable hemorrhage,—a termination of the case in this way having been daily expected. The carotid foramen is to a great extent, and the jugular foramen almost completely, obstructed by a deposit apparently of bone. There is a similar deposit in the Glaserian fissure and over a considerable extent of the inner surface of the bone.

Dr. J. EWING MEARS exhibited the *uterus, bladder, and ovaries* removed from a patient of Dr. W. J. Fleming, of this city. The following is a short history of the case:

Mrs. V., æt. 46, was married at the age of twenty-three years, and has borne three children. Menstruation was regular until August, 1870. The disease first manifested itself in April, 1870, by a general fullness of the abdomen without œdema.

On June 18, 1871, she was tapped, and sixteen pints of dark-colored fluid were removed.

July 10.—She was tapped by Dr. W. L. Atlee, and a large bucketful of yellowish-green fluid was removed. At this time there was œdema of the abdominal walls and lower extremities. The fluid was submitted to Dr. Mears for examination, who reported to Dr. Atlee that he did not regard it as ovarian

in origin. On making post-mortem examination it was found that the fluid in each instance of tapping had been taken from the abdominal cavity, which at the time of the examination also contained a large quantity. The right ovary was the size of a small lemon, and solid. The left ovary had undergone cystic degeneration, and was about the size of a child's head. It was found occupying the *right* iliac fossa, and its pedicle exhibited a twist, to the extent of *two full* turns. The cyst was multilocular in character, and contained a small quantity of dark, dirty-colored fluid. The surface of the tumor had a congested appearance. It had never been tapped, and its growth had evidently been interfered with by the twist in the pedicle. The parietal peritoneum was very much thickened and roughened. On this surface and on the small intestines at different points were found small masses of plastic matter.

Dr. JOHN S. PARRY said he thought this subject of "twist in the pedicle" one of considerable interest. His attention was first directed to it about two years ago, and recently he had looked up all the cases he could find recorded. He found only ten unequivocal cases reported by English and American authorities; and he has been able to find references to only two papers on the subject by Continental writers,—one by M. Texier, of France, in 1869, and the other by Rokitsky, in 1865. Of the ten English and American cases, six terminated fatally and four lived. All of the four were operated upon, and none were accompanied before the operation by any symptoms pointing to this complication. All of the six fatal cases were attended by serious symptoms. Of the fatal cases, two died from the effects of gangrene, two from shock, one from shock and cyst combined, and the sixth from constriction of the bowel.

The only remaining case has been reported by Bennett, of Edinburgh. On dissecting the patient, the ovarian fluid contained much cholesterol, had the color and the odor of bile, and gave the characteristic reaction of bile. The most careful examination revealed no communication whatever between the intestinal canal and biliary passages.

One of the most interesting questions, Dr. Parry thought, was that of diagnosis. In the case of supposed axial twisting which he reported, there was a sudden enlargement of the cyst, its dimensions increasing from all directions in twenty-four hours. In most of the cases there was a considerable amount of blood effused into the cavity of the cyst.

Dr. MEARS said he had been fortunate in having the opportunity of examining many specimens of ovarian fluid, and had in every instance noted the presence or absence of blood. In a large number of cases there was a small quantity of blood, and he had found uniformly that such blood was present in the cyst by reason of the rupture of the walls of secondary cysts. He had never met a very large quantity of blood in ovarian cysts, and that which he found was generally in multilocular cysts. He considered such blood evidence, though not infallible, of their multilocular nature.

Dr. M. said Dr. Atlee has met in his operations a number of instances in which the pedicle had been twisted. Blood was only occasionally present in the cyst, and in no instance did he find the symptoms laid down by Dr. Parry. It is important, of course, to determine whether the twist is sufficient to interfere with the circulation of blood through the walls of the tumor; for if this should be sufficient to produce sudden congestion, such hemorrhage might result. He was inclined to think that the slight growth of the tumor in this case was due to the twist in the pedicle.

In all examinations of the fluid from this case he had reported it as non-ovarian fluid. It was not very viscid or gelatinous, was of a light straw color, and contained but a small quantity of albumen,—about as much as is found in the serum of the blood. There were a few shrivelled epithelial cells and some granular debris, but no blood. There was in this fluid a formation of fibrinoid substance. On Sunday last he had tapped a patient, who was supposed to be the subject of cystic disease of the ovary, of twenty-three pints of fluid. This fluid was kept and exposed to the air, and in a few hours a fibrinoid mass formed in it. He was satisfied from this fact that the fluid had not come from an ovarian cyst. He thought this substance was not found within the walls of an ovarian cyst, and considered its presence or absence to be at least of some value in the diagnosis.

The fluid contents of ovarian cysts vary in their physical properties and microscopic appearances according to the character of the cyst from which they are removed. In simple unilocular cysts, in which usually but little fatty degeneration has taken place in the cells of the internal lining membrane, the fluid contains but a small quantity of solid contents; it is, therefore, not very viscid, contains usually somewhat more albumen than is found in the serum of the blood, is transparent, of a straw color, and presents under the microscope a few granule-cells and free granules. In multilocular cysts the fluid contains more solid matter, owing to the disintegration of the cells which have been thrown off by the process of fatty degeneration. It contains also more albumen, which is derived from the disintegrated cells, and which is added to that existing in the liquid portions of the fluid. It usually presents a characteristic chocolate color, owing to the presence of the fatty matter, and also of blood, derived from the division of the vessels in the walls of the secondary cysts which are ruptured. The large proportion of albumen renders it very viscid and gelatinous, and the microscope shows it to contain a large quantity of granule-cells of varying sizes, free granules, blood-corpuscles, sometimes altered in appearance, and frequently plates of cholesterol.

The compound granule-cell found in ovarian fluids does not belong exclusively to these fluids; it is found in many other fluids, and cannot with propriety be designated as the *ovarian cell*.

Dr. WILLIAM PEPPER said that he had had little experience with regard to the formation of fibrinoid masses in ovarian fluids, but so far as his experience went he agreed with Dr. M. He could not, however, agree with him as to these masses being found only in fluids of inflammatory origin. They very generally form in ascitic fluids, commonly the next day after tapping, and also in pleuritic fluid, whether or not of inflammatory origin. That there is in many such cases some degree of inflammatory action is unquestionable; but it very rarely happens that we have a large serous effusion without finding, on allowing it to stand, the formation of more or less of these fibrinous masses.

In answer to a question of Dr. Mears, Dr. Pepper said he did not think that the substance was necessarily or strictly fibrinous, though possibly the result of exposure on some of the fibrinoid matters of the fluid.

The specimen was referred to the Committee on Morbid Growths, who reported that "the tumor was almost entirely converted into a cyst, with brittle, granular, reddish-brown contents, which on microscopic examination proved to consist of partially-bleached shrunken blood-corpuscles and granular detritus."

REVIEWS AND BOOK NOTICES.

A NEW OVARIOTOMY CLAMP. By B. F. DAWSON.

In this little pamphlet Dr. D. prefaces the description of his new ovariectomy clamp by a few pertinent remarks on the difficulties encountered in ovariectomy. He alludes to the great improvements in this comparatively new operation, and then proceeds to the many ways of treating the pedicle,—viz., to ligate it and return it to the peritoneal cavity, to clamp it and keep it external to the abdominal wound, or, in lieu of these, to use the *écraseur*, actual cautery, or laceration. The most distinguished operators use the clamp, which is followed by much better results than the ligature. The object of all clamps is to so compress and retain the pedicle as to control all hemorrhage, either temporarily, until the ligature is passed, or permanently, without the ligature. All clamps compress the pedicle between two parallel arms of metal brought into coaptation by two screws, or a hinge and screw combined, except the new clamp of Dr. Atlee. They all have a tendency to cause a spreading of the pedicle while being compressed, which forces open the edges of the wound and prevents perfect ligation of the pedicle. It also causes the pedicle to expand transversely to the wound, and thus prevents a proper approximation of the edges. Dr. Atlee's new clamp prevents this spreading, by compressing in four directions; but, although a good one, it is complicated, and not so readily

adjusted as that invented by Dr. D., while the circular clamp of Mr. Spencer Wells does not nearly so thoroughly prevent the spreading. Dr. D. claims for his clamp a new mode of action and simplicity of mechanism. "Its principal features are—1. It compresses the pedicle in a uniform manner, and into as small a compass as may be needed. 2. The compressing force is exerted by a single screw. 3. Its application is quick and exceedingly simple. 4. With it a ligature can be passed directly around the compressed portion of the pedicle, and be made more secure than with other instruments. 5. Écrasement can be performed."

The clamp consists of two elliptical arms of metal, fastened together by a hinge-joint at one end, and at the opposite end by a thumb-screw. Along these arms a slide (a semi-ellipse) is moved by a strong screw, passing out between the ends fastened by the thumb-screw. The arms are separated by the hinge and one is passed around the pedicle, when they are fastened together by the thumb-screw. The slide is now screwed down upon the pedicle, and certainly does compress it in a uniform manner and into a very small compass. If we wish to ligate the pedicle, we pass a ligature beforehand between the lower blades of the slide and the arms, and then apply the clamp. Thus the ligature can engage the pedicle as tightly as may be desired, and without any strain upon it until the clamp is removed.

This instrument can also be used to remove hemorrhoids, portions of the tongue, penis, scrotum, and extraneous growths. It is very light and compact; we think well of it, and feel assured that it will meet most of the objections to clamps in general.

THE PHYSICIAN'S DAILY POCKET RECORD: comprising a Visiting List, many Useful Memoranda, Tables, etc. By S. W. BUTLER, M.D. Philadelphia, Published at the Office of the *Medical and Surgical Reporter*, 1871.

The Pocket Record is evidently intended to meet the wants of the busy practitioner of medicine, for, besides containing a visiting list, which is so arranged that it may be used for a year from any date, it comprises, as its title-page indicates, many useful memoranda and tables. Among these are to be found "A List of New Remedies, their Application, Doses, and Market Value," which has been revised by Horatio C. Wood, M.D., Professor of Medical Botany in the University of Pennsylvania.

It contains also some directions for the treatment of persons asphyxiated, and for the examination of the urine, together with the doses of medicine for hypodermic injection and for inhalation. The spring by which the book is fastened will be found, we think, very convenient.

THE PREVENTION OF ABSCESSSES IN HYPODERMIC MEDICATION, with a Description of an Instrument for the Injection of Strychnia. By REUBEN A. VANCE, M.D., Physician-in-Chief to the New York Institution for the Paralyzed and Epileptic, etc.

CLINICAL EXAMINATIONS OF URINE, with a Description of a Convenient Apparatus for its Speedy Analysis. By REUBEN A. VANCE, M.D., etc.

Both of these pamphlets are reprints from *The Medical World*. The former contains a description of a syringe by means of which so small a quantity as the eighth of a minim may be injected hypodermically. Believing that the abscesses which so frequently follow the use of hypodermic injections are caused either by the use of a too acid solution of the medicine employed, by a rusty condition of the needles, or by the injection of too large a quantity of fluid, Dr. Vance recommends that the solution shall be as concentrated and as slightly acid as possible, and that the syringe shall be provided with gold needles. He recommends the use of the following solution of strychnia:

R Strychniæ Sulph., gr. j;
Acid. Acet. dil., ℥j;
Aque, ad ʒj. M.

S.—Ft. sol.

He believes acetic acid, because it is an organic acid, to be less irritating than the mineral acids, while its solvent power is as great as that of nitric or sulphuric acid.

In the second paper, Dr. Vance describes an apparatus for the speedy analysis of the urine, and calls attention to the proper application of the tests for the detection of albumen.

BOOKS AND PAMPHLETS RECEIVED.

The Transactions of the American Medical Association. Vol. xxii. 8vo, pp. 383. Philadelphia, printed for the Association, Collins, Printer, 1871.

Modern Medical Therapeutics: A Compendium of Recent Formulæ and Specific Therapeutical Directions. By George H. Napheys, A.M., M.D., one of the Editors of the Half-Yearly Compendium of Medical Science, etc. Third Edition, Revised and Improved. 12mo, pp. 496. Philadelphia, S. W. Butler, M.D., 1871.

The Physician's Daily Pocket Record: comprising a Visiting List, many Useful Memoranda, Tables, etc. By S. W. Butler, M.D. Philadelphia, Published at the Office of the *Medical and Surgical Reporter*, 1871.

Stimulants and Narcotics, Medically, Philosophically, and Morally considered. By George M. Beard, M.D. 12mo, pp. 155. New York, G. P. Putnam & Sons, 1871.

Eating and Drinking: A Popular Manual of Food and Diet in Health and Disease. By George M. Beard, M.D. 12mo, pp. 180. New York, G. P. Putnam & Sons, 1871.

Transactions of the Medical Society of the State of Pennsylvania at its Twenty-Second Annual Session. 8vo, pp. 501. Philadelphia, Collins, Printer, 1871.

Three Cases of Imperforate Anus, with Remarks. By J. H. Pooley, M.D. Reprinted from the *American Journal of Obstetrics and Diseases of Women*.

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Pulmonary Consumption: Its Nature, Varieties, and Treatment, with an Analysis of One Thousand Cases to Exemplify its Duration. By C. J. B. Williams, M.D., F.R.S., etc., and Charles Theodore Williams, M.A., M.D., Oxon. 8vo, pp. 315. Philadelphia, Henry C. Lea, 1872.

GLEANINGS FROM OUR EXCHANGES.

FATTY DEGENERATION.—The *Medical Times and Gazette* of November 4, 1871, contains an excellent editorial notice, the result of some recent experiments by Voit (*New Rep. Pharm.*, vol. xx. p. 340) on this subject. The fatty degeneration of organs, so frequent in disease, may be brought about in one of three ways: 1. The fat which takes the place of the tissues might be derived from the fat in the food. 2. It might be derived from other parts of the body which usually

contain fat, as the subcutaneous adipose tissue. 3. It might be generated in the cells of the affected organs by the splitting up of the albuminoids contained in these into nitrogenous and fatty substances. In the last case, the nitrogenous products of the metamorphosis of the albuminoids—as, for instance, urea—would not be altered in amount, but the consumption of oxygen in the body would be diminished. Further, it is possible that the cells of the structure may become atrophied, and disorganization of the tissue ensue, from more albumen than usual being decomposed,—more especially that which enters into the structure of the cells themselves. Obviously, in this case, the azotized constituents of the excretions would be increased, while the oxygen consumed would be either diminished or unaltered. The idea was conceived of giving phosphorus to dogs after depriving them of food for several days, it being well known that fatty degeneration of many, if not all, the organs is produced by the administration of phosphorus; and this was found to be the case when food was withheld. As the animal ingested no food, the fat here could not have come from that source, nor from the adipose tissue of the body, for it was found that that had disappeared, and, in consequence of abstinence from food, the animals were emaciated before the administration of the drugs. Hence the fat must have been the result of a metamorphosis of albumen in the organs themselves. A dog, placed in Voit's respiration apparatus, exhibited a diminution of forty-seven per cent. in the carbonic acid excreted, and of forty-five per cent. in the oxygen absorbed, when phosphorus was administered. The excretion of urea, previously constant, rose after the ingestion of the phosphorus, and increased after the symptoms of poisoning became more severe. The experiments of Voit, with whom Bauer was associated, show that in phosphorus-poisoning fatty degeneration is due to two causes,—the decreased oxidation of fat, and the increased production of fat by the metamorphosis of albumen. It is shown that this latter is independent of the supply of oxygen, and is dependent not so much on the oxidation of albumen as on the decomposition of the oxidized products of this substance. Voit and Bauer observed that no abnormal products are found in the urine except sarcolactic acid in fatal cases, thus confirming the results of Schultzer and Reiss. Leucin and tyrosin were looked for in vain in the urine of the poisoned dogs, although, as is known, these substances are abundant in cases of acute atrophy of the liver. They were found, however, in the liver, heart, and blood. It is thought very probable that leucin and tyrosin are among the first products of the decomposition of albumen, and that the nitrogenous bodies formed by the metamorphosis are changed into urea in the lighter cases of poisoning by phosphorus, while in the more severe cases the decomposition is imperfect and the less simple products of decomposition are excreted.

Voit considers that the main difference between acute atrophy and phosphorus-poisoning lies in the greater rapidity of degeneration in the former disease. Since the fat in fatty degeneration is solely that which has been formed in the organs, and either not oxidized or formed in too great quantity, it cannot be said when the diseased process begins and the healthy ends. At first the fat will be formed in its usual quantity from the circulating albumen, then from the stored-up albumen in the organs, and finally from the albumen forming an essential constituent of the cells; and thus the destruction and disorganization of the organs composed of these are brought about.

TUBERCULOSIS OF THE BRAIN IN CHILDREN.—In a paper on this subject, Dr. Fleischmann (*Journal für Kinderkrankheiten*; from *Jahrbuch für Kinderheilkunde*, iii. 1) reports twenty-one carefully observed cases of this affection. Of the twenty-one cases, six were under two years and fifteen over two years of age, the youngest eleven months and the oldest eleven years. As to sex, they were nearly equally divided, ten being boys and eleven girls. The largest number of deaths occurred in the spring and summer; in February, May, June, and September, each three, in March four, and in April two. The average duration of the disease was $2\frac{1}{2}$ months, the shortest being eight days and the longest six months after the appearance of brain-symptoms. As to the seat, in eight cases it was the cerebellum, in eight the cerebrum, and in five both were involved. The common seat of the tubercles was

the gray substance, more seldom the pons, the right optic thalamus, the peduncles of the brain, and the right corpus striatum.

A single tubercle seldom occurred, but usually two to three were present,—seldom more. In the twenty-one cases there was tubercle in other organs, with a single exception. As to symptoms, convulsions were present in thirteen instances, paralysis in twelve, four times involving the oculi motor, twice the facial and optic; insensibility of the skin was ten times observed, hyperæsthesia twice. When the cerebellum was involved, there was more frequent disturbance of special sense, involving more particularly the optic, facial, and auditory nerves. Basilar meningitis accompanied tubercles in the cerebellum eight times, and in the cerebrum four times, and there was chronic hydrocephalus without tubercular meningitis along with tubercles in the cerebellum in five instances, and once accompanying tubercles in the cerebrum, in each instance along with extensive tubercular deposit.

The experience of some observers that where there is paraplegia the tubercles involve the cerebellum, and that where one-sided symptoms present themselves the opposite side of the cerebrum is the first seat of the tubercles, Dr. Fleischmann's studies did not confirm.

DIABETES PRODUCED BY CARBONIC OXIDE.—Senff has succeeded (*L'Union Médicale*, November 11) in producing a diabetic condition of the urine of dogs, by making them inhale carbonic oxide until the appearance of symptoms of poisoning, when the operation is suspended for a short time, to be afterwards resumed. The glycosuria which was thus produced lasted for three or four hours. The inhalation likewise gave rise to a free excretion of urine, which also contained a small amount of albumen. The introduction of a solution of sugar into the blood did not increase the amount of sugar contained in the urine. There was reason to believe that in these cases the diabetes depended upon an increased production of sugar by the liver.

MISCELLANY.

SINGULAR UNIFORMITY OF THE MORTALITY-RATE, ILLUSTRATED BY THE STATISTICS OF CASES OF SMALLPOX IN PHILADELPHIA FROM 1860 TO 1870 INCLUSIVELY.

Years.	Deaths.	Cases.	Average.
1860	57	380	1 death in 6.6 cases.
1861	758	5,053	" 6.6 "
1862	264	1,760	" 6.6 "
1863	171	1,140	" 6.6 "
1864	260	1,733	" 6.6 "
1865	524	3,493	" 6.6 "
1866	144	960	" 6.6 "
1867	48	326	" 6.6 "
1868	1	7	" 7 "
1869	6	40	" 6.6 "
1870	9	60	" 6.6 "
Total	2,242	14,952	" 6.6 " or 15 p.c.

The above figures, which are taken from the records of the Board of Health, demonstrate in a remarkable manner the uniform operation of the law which has governed the rate of mortality from smallpox in this city during the last decade. It is very certain that all of the *deaths* from smallpox are duly reported, and quite probable that all *cases* of the disease are not so; and yet so uniform has been the ratio of this error that year after year the *proportion* of deaths to cases has been the same to a fraction. The average mortality of fifteen per cent. furnished by this table evidently refers to the unvac-

cinated as well as the vaccinated; for, apart from the fact that no such distinction is made in the reports, it is much less than the ordinary death-rate for the former, and much more than the average mortality among the latter. At the London Smallpox Hospital, during a period of fifteen years, the average mortality among unvaccinated persons of all ages was 37 per cent., while among the vaccinated the average mortality was 6.56 per cent. It is evident, therefore, that in our community, although a large measure of protection is derived from vaccination, a still larger one—one twice as great, indeed—would be secured by universal and thorough vaccination.

AN APPEAL TO THE ALUMNI AND FRIENDS OF THE RUSH MEDICAL COLLEGE, RECENTLY DESTROYED BY FIRE, FOR AID TO ASSIST IN ITS REBUILDING.—We cheerfully give place to the following appeal which has been sent to us from Chicago, and heartily commend it, not only to the notice of the Alumni of the Rush Medical College, but also to the friends of medical education generally in this country:

"This college is among the oldest institutions of learning in the Northwest, having been in operation since 1843, at which time the region now tributary to Chicago was but sparsely populated and had little wealth. During this time it has supplied a pressing need of this new country. It has educated a large number of young men, who are scattered through our whole country, worthily filling places of great usefulness and responsibility; and for this both themselves and the public are indebted, in a great measure, to the school in which they received their instruction. A large proportion of the students have been possessed of little save youth, hope, intelligence, and determination. Many of these, having been generously aided by the College, have taken rank among the most substantial members of the profession. The Faculty at all times since its organization has been moved by an earnest desire to promote the best interests of the profession and the College. For this its members have labored faithfully and earnestly; they have met the pecuniary burden of the school from its first foundation, and four years since they erected from their own resources, at an expense of seventy thousand dollars, the most ample and best-appointed college building on this continent, and filled it with every necessary appliance for successful teaching; and the influence and usefulness of the school have steadily increased from year to year. But in a day, the college building, with all its contents, was swept away, along with a large part of the city in which it stood a peer among many other noble institutions of learning. The pecuniary loss of the Faculty in the destruction of the college is light when weighed against others they have sustained. A number have lost nearly everything, and all have suffered much. The college must be rebuilt. Its past history, its future promise for good, demand no less. Under the circumstances, it is unreasonable to expect the Faculty to do this unaided. The College is now in a condition to justify an appeal to its Alumni and to society for some return for the favors it has conferred upon both. There is, perhaps, no field of benevolence that offers a richer return than to provide adequate and easy opportunities for instruction to those who desire to become learned in the best means for assuaging pain and healing the sick.

"All donations may be remitted to Chas. T. Parkes, M.D., 462 Elston Avenue, Chicago, who has been elected treasurer for the fund. They will be thankfully acknowledged, and faithfully devoted to the rebuilding of the college."

The following offer has been made by the trustees of the College:

"For every donation of five hundred dollars the trustees will establish a perpetual free scholarship, which shall bear the name of the donor, and which shall be conspicuously emblazoned on the wall of the lecture-room. A certificate of this scholarship, engrossed on parchment, will be issued to the donor, which certificate shall secure to the bearer free

tuition and, when found qualified, free graduation. This certificate shall be perpetual in its operation, and thus the donor will have endowed for one student each year a Free Medical College.

"WILLIAM B. OGDEN, *Chairman.*
"GRANT GOODRICH, *Secretary.*"

METEOROLOGICAL.—The mean temperature of the month of November, 1871, was 41° Fahr. The highest temperature recorded during the month was 66°, on the 1st; the lowest was 22°, on the 29th and 30th. The highest mean temperature for November on record is 50°.5, in 1849; the lowest, 38°, in 1793, 1837, and 1842.

The total rain-fall for the month was 4.26 inches, the average rain-fall for the corresponding month during the past thirty-four years being 3.5 inches.

BARBARITY.—A number of medical students have been shot in Havana for desecrating the grave of Gonzalo Castañon. The punishment seems out of all proportion severe for the offence.

THE number of deaths from smallpox in Philadelphia during the weeks ending December 2 and 9 were 432, of which 259 were of minors.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending		
	Nov. 25.	Dec. 2.	Dec. 9.
Consumption	35	5	33
Other Diseases of Respiratory Organs	34	19	34
Diseases of Organs of Circulation	19	31	15
Diseases of Brain and Nervous System	34	43	50
Diseases of the Digestive Organs	16	15	24
Diseases of the Genito-Urinary Organs	4	5	7
Zymotic Diseases	174	256	219
Cancer	6	6	7
Casualties	10	8	7
Debility	25	31	28
Intemperance	1	0	4
Old Age	9	17	12
Scrofula	1	0	4
Stillborn	15	18	20
Suicide	0	1	2
Tumors	1	2	3
Unclassifiable	9	10	11
Unknown	1	1	2
Totals	394	508	482
Adults	197	261	259
Minors	197	247	223

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM NOVEMBER 19, 1871, TO DECEMBER 4, 1871, INCLUSIVE.

GHISELIN, JAMES T., SURGEON.—By S. O. 453, War Department, A. G. O., November 23, 1871, to report to the Commanding General Department of the Columbia, for temporary duty at Portland, Oregon.

McCLELLAN, ELY, ASSISTANT-SURGEON.—By S. O. 246, Department of the South, November 23, 1871, assigned to duty at Crab Orchard, Ky.

GIBSON, JOSEPH R., ASSISTANT-SURGEON.—By S. O. 452, c. s., War Department, A. G. O., to report to the Commanding General Department of the South for assignment to duty.

MACKIN, CHARLES, JR., ASSISTANT-SURGEON.—By S. O. 450, War Department, A. G. O., relieved from duty in Department of the Platte, to proceed to Boston, Mass., and report thence to the Surgeon-General.

KOERPER, E. A., ASSISTANT-SURGEON.—By S. O. 220, Department of Texas, November 13, 1871, assigned to temporary duty at San Antonio, Texas.

DE WITT, C., ASSISTANT-SURGEON.—By S. O. 76, Department of Arizona, October 17, 1871, assigned to duty at Fort Yuma, California, relieving Assistant-Surgeon Lauderdale, under orders for New York City.

MONDAY, JANUARY 1, 1872.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE OPHTHALMOSCOPE IN THE DIAGNOSIS OF INTRACRANIAL DISEASE.

BY WILLIAM F. NORRIS, M.D.,

Lecturer on Diseases of the Eye in the University of Pennsylvania.

Delivered November 23, 1871.

I DESIRE to call your attention to-day, gentlemen, to two cases of intracranial disease, and to study with you the disturbances which they have produced in the innervation of the parts supplied by the cranial nerves, directing your attention more particularly to the changes which have taken place in the circulation and nutrition of the retina and optic nerves, and to the consequent impairment of vision.

D. H., æt. 28, glassblower, presented himself, January 28, 1871, at the University clinic, complaining of failing vision, and intense headache in the right temple, which is always worse at night, often causing him to walk the floor of his room for hours at a time. The eyes are apparently healthy, and are mobile in all directions; but there is a slight falling of the right upper lid, and partial paralysis of that side of the face, causing considerable distortion of the countenance when he laughs. He has marked deafness on this side, and a tuning-fork held at the vertex is only heard on the left side, although when it is placed over the right mastoid cells it is still faintly heard on the same side, thus proving that the auditory nerve is only partially paralyzed. The Eustachian tube is patulous, and the tympanum, although slightly cloudy, presents no marked disease. He complains at times of a loud noise, as of letting off steam, in this ear. Both eyes, when examined with the ophthalmoscope, show marked changes in the optic nerve and the retinal circulation. The optic disks, instead of being in the same plane as the adjacent retina, are in a state of serous infiltration (œdema), and bulge forward into the cavity of the eyeball. The retinal veins are distended and tortuous, and bend down over the projecting intraocular end of the nerve, to spread out as usual in the nerve-fibre layer of the retina. Although the swelling has caused marked changes in the circulation, the strangulation of the nerve-fibres has not been sufficient to interfere materially with conduction, and consequently, as there are no changes in the retina itself, and the macula lutea is healthy, the vision is but little impaired.* The patient states that nine years ago he had a chancre, followed by a suppurating bubo of the left groin; that since that period he has enjoyed good health until the last eight months, when his vision began to fail him, and he was about the same time seized with a spasm (a violent contraction of the arms and legs) while at his work, and became aphasic for several hours. On the exterior of the left thigh, beneath the vastus externus, growing apparently from the periosteum, is an ovoid tumor, three and a half by one and a half inches in diameter. It is soft, elastic, and gives the patient no inconvenience.

Such was the state of the patient, as many of you will recollect him, in January last; and, after carefully weighing his symptoms, I concluded that they were due to a syphilitic gumma, situate probably in the middle fossa of the base of the skull, and that the tumor on

the thigh was of the same nature. He was accordingly treated with mercury until the constitutional effects of that drug were perceptible, and subsequently with iodide of potassium in ten-grain doses. Under this treatment he lost his headaches, the swelling of his disks diminished, and he ceased attendance at the clinic, being able to resume his work. He now returns (November 23) worse than at that period,—vision in the right eye $\frac{20}{1}$, in the left $\frac{20}{XXX}$. The headaches have returned, and superadded to the symptoms before described are a slight divergent squint of the right eye, and an unsteadiness in gait; and when his eyes are closed he falls over towards the right side.

The second patient whom I shall present to you,

D. O'B., æt. 30, is muscular, well nourished, and apparently in good health. He admits having had a chancre four years since, but says it was never followed by any secondary symptoms, but that he has been addicted to the excessive use of alcohol. Last July he had an attack of mania a potu, and, on recovering from it, remarked that his vision was no longer so good as formerly. He complains of frontal headache (always present to a greater or less degree), a feeling of dizziness, causing him to be conscious of an effort to walk straight, of flashes of light when he is in the dark with closed eyes, and of great diminution of the acuity of vision. He is no longer able to read any ordinary type, and can decipher only the big E of Snellen's tables at ten feet ($V = \frac{10}{200}$). The ophthalmoscope shows that in each eye the disk is of a dirty bluish-gray color; that the pink blush due to the capillary supply of a healthy disk is entirely wanting. The disk is not swollen, does not project into the eyeball, and there is no marked alteration in the calibre of the central arteries and veins.

We have here to do with a commencing atrophy of the nerve, caused by an interstitial neuritis,—a process which has probably commenced within the cranium and marched downwards towards the eye (a true "neuritis descendens"). If we could make a section of the nerve, we should probably find the connective tissue forming the sheath of the separate nerve-fibres, as well as that between them and the main sheath of the nerve, in a state of active proliferation; but whether this be due to a creeping syphilitic inflammation of the meninges at the base of the skull, or to an idiopathic proliferation caused by the abuse of alcohol,—a proliferation which is without doubt present in his liver (it is tender on pressure and the area of hepatic dulness is much enlarged),—I must confess I am unable to decide.

I have brought these cases before you in order to contrast two varieties of so-called neuritis: the one a venous engorgement of the optic disk, the other a true interstitial inflammation of the nerve; the one often accompanied with but little disturbance of vision, the other always by a considerable impairment of it; the one may have its origin in any augmentation of intracranial pressure, the other has usually for its starting-point an encephalitis or meningitis.

In order that you may obtain a distinct idea of the mechanism of these changes, I must ask you to consider for a moment the course of the circulation in the normal eye.

As you know, the ophthalmic artery is the sole source of supply of blood to the eyeball, and gives off to it the central retinal artery, the long and short ciliary, and the muscular arteries,—the latter in turn giving off the anterior ciliaries. The blood supplied by these vessels is collected by the vasæ vorticosæ, the anterior and posterior ciliary veins, and thrown into the ophthalmic vein, which in turn empties into the cavernous sinus. Now, it is evident that, since the veins of the eyeball

* January 28.—O. D. Ophthalmoscope shows a hyperopia of one-sixteenth at the summit of the papilla, and only one-sixtieth at the macula.

$$V = \frac{20}{XXX}$$

O. S. Hyperopia one-twenty-fourth at summit of optic papilla,—one-sixtieth at the macula. $V = \frac{20}{XXX}$

Accommodation good; reads from No. 1 Jaeger (Diamond type), from $5\frac{1}{2}''$ to $10''$.

† The small post-ciliary veins consist only of small veinlets from the sclerotic, all the blood from the uveal tract being returned by the vasæ vorticosæ.

have no anastomosis with any other set of vessels, any slight increase of pressure in the ophthalmic vein will cause dilatation and tortuosity of the veins within the eyeball. This in case of the central retinal vein is particularly striking, because of the anatomical arrangement of the optic nerve. As you are aware, it has a dense fibrous sheath, and, just before entering the eye, each fibrilla divests itself of its fibrous envelope, and these, forming an interlacing bundle of fibres (known as the lamina cribrosa), cross the nerve in all directions, to unite with the external sheath. Thus, at this point its fibrous envelope, being bound down in all directions, is absolutely inextensible, and any slight increase of volume causes a constriction as if from a ligature, the retinal veins swell and become tortuous, and the serum escaping causes an œdema of the nerve-fibres; in short, as Gräfe expresses it, the lamina cribrosa acts as a "multiplier," causing a marked venous stasis in the retina when there is only a slight increase of pressure within the cranium; and thus any increase of intracranial pressure, whether from a tumor, aneurism, hydrocephalus, or other cause, may give us choked disks. On the other hand, an interstitial inflammation causes a gradual compression, both of the vessels and nerve-fibres, in the entire length of the nerve, and is accompanied by less œdema and venous stasis. These distinctions are not hypothetical, but based on numerous autopsies, conducted by eminent pathologists (Virchow, Iwanoff, Leber, and others); and in the one case the alterations in the nerve are usually limited to its intraocular end, and bounded by the lamina cribrosa; in the other they extend throughout its entire length.

In typical cases, the picture presented by a choked disk and that presented by an interstitial neuritis are very different, and in their early stages readily diagnosed; but after the choked disk has long continued, a true interstitial inflammation may set in, and the eye thus present mixed forms, making it difficult, if not impossible, to differentiate them. Where we can do so, it often affords a valuable hint as to the nature of the changes going on within the cranium.

Lastly, gentlemen, let me call your attention to the great advantages which the general practitioner may derive from the use of the ophthalmoscope. In my opinion, as a means of physical diagnosis it is second only in usefulness to auscultation and percussion. In the first of the two cases which you have seen to-day, although the ophthalmoscope rendered the diagnosis more certain, we should probably without it have arrived at the same result; in the second, however, without its aid we should have been entirely in the dark. Let me instance two other cases in which its aid is often invaluable. You know, doubtless, how obscure the diagnosis is often in the early stages of tubercular meningitis. A child loses its appetite, is fretful and cross, has slight headache, occasional vomiting, constipation, and you are in doubt whether it be a transient ailment or the above-mentioned formidable disease. If, under these circumstances, you examine its eyes and find either a choked disk or a neuritis, you need no longer hesitate as to the grave character of the malady you have to deal with. Or, again, a patient walks into your office complaining of dim vision, and the ophthalmoscope reveals to you the characteristic changes of Bright's disease in the optic nerve and retina; you are at once put on the track of the fundamental disease, even if, as sometimes happens, the constitutional symptoms have been so little developed that he does not consider himself sick. Moreover, I need only mention to you the frequency with which changes in the interior of the eye accompany fractures and diseases of the spine, locomotor ataxia, cerebritis, meningitis, and the neuritides arising from the toxic

effects of lead, alcohol, and tobacco, to convince you that it is an important aid to diagnosis.

I would not conceal from you that it is difficult to acquire skill in its use; but it is not more difficult than to acquire skill in auscultation and percussion, or in the use of the microscope. To obtain the full advantages derivable from it, you must learn to use the upright image in your examinations, since you thus obtain a much more magnified view of the fundus than is attainable with the inverted, and since details which escape your notice in the latter, owing to the intense illumination and the small size of the image, are readily detected by the former. Indeed, those who cannot use the upright image are unfit to make any refined diagnosis of intraocular disease.

In conclusion, let me remind you that the internal half of the disk is, in a state of health, always redder than the external, and that the physiological varieties in its shape and appearance, as also in the distribution of the vessels, are almost as infinite as the variety of feature in the human countenance, and that therefore you should avail yourselves of every opportunity to study normal eyes,—and not too lightly give an off-hand opinion as to any slight variation which you may detect from the typical appearance of the optic disks.

To those of you who desire to become familiar with the literature of the subject, I would recommend the late work of Allbutt,* as giving not only his own observations and conclusions, but also an able résumé of those of the best Continental and English observers.

ORIGINAL COMMUNICATIONS.

OSTEOLOGICAL NOTES.

BY HARRISON ALLEN, M.D.,

Professor of Comparative Anatomy in the University of Pennsylvania.

THE LONG BONES IN HEALTH AND DISEASE.

THE characters of a long bone are of two kinds,—generic and specific. The generic are those pertaining to the general shape of the bone as determined by its *static* relations; the specific are those pertaining to the motion of the bone, or its *dynamic* relations. The variations in the shapes of bones of the adult in health and disease are also of two kinds, and correspond to the above. Modifications of the generic character, as might be supposed, are by far the less frequent, and, so far as I know, are almost entirely restricted to what may be called *the retention of the juvenile characters*.

The exact extent to which the early shape of a bone is preserved in that of the adult is yet to be determined. Nor can this be done until a critical examination of skeletons of "dwarfs" and "giants" and of the subjects of rickets shall have been instituted. I have observed sufficient, chiefly from among specimens of the latter disease, to suggest that the bones of "dwarfs" are examples of a premature cessation of the epiphysal period, thus stunting the growth of the diaphyses, as those of "giants" may be the result of a prolonged epiphysal condition, permitting the shafts to attain an unusual size. The very common disproportionate volume of the head (too large in the former, while not large enough in the latter) is readily explained on the ground that the skull is without epiphyses. The size of the skull is determined by the necessities of contained parts,—viz., the brain, organs of sense, and the teeth. The bones of the limbs, on the other hand, as is known,

* The Use of the Ophthalmoscope in Diseases of the Nervous System, etc. By T. C. Allbutt, A.M., M.D. London and Philadelphia, 1871.

are shaped by the needs, as it were, of the body for support and motion.

Now, in rickets the epiphyses often unite too early with the diaphyses, and it is interesting to note that the epiphyses will often preserve throughout life the shape existent at the time of the premature union. This is particularly noticeable with the epiphyses composing the tibio-femoral articulation. In another group of specimens, chiefly of the tibia, the proximal epiphysis apparently ceases to grow, while great activity is evidenced in the shaft. The resulting shape with such is unlike that of the traditional tibia. The condyloid facets are small; the entire proximal extremity appears as though thrust back upon a long misshapen shaft, whose tuberosity is inconspicuous. I conjecture that such bones have been secured from weak, thin-shanked individuals,—examples of those youths of whom it is said "they have outgrown their strength."

The *specific* or dynamic features of a long bone are due, as above remarked, to muscular relations. The statement in the form of a proposition would read thus: The causes of specific variation in the forms of long bones are to be found chiefly in the muscles associated with them. The shapes of the bones of A differ from those of B, inasmuch as A and B follow different occupations. The tailor, sitting with thighs abducted, would present femurs showing opposite tendencies to those of the dragoon, whose adductors are powerfully developed. It is, of course, impossible from examining cabinet preserved specimens to determine the occupation of the individuals from whom they were obtained, since the bones are, with but few exceptions, destitute of history. Nor can such points, which are not without value, ever be settled outside of a hospital museum, where to every osteal specimen a full description of the person yielding it may be attached. In the absence of this, it remains for the anatomist to note a few of the more striking differences to be detected in the forms taken from an indiscriminate collection.

The *humerus* is an example of the rule that in long bones the greater portion of the shaft is devoted to the origin of muscle.

The bone is best divided, not into a shaft with extremities, as is said of it in common with all long bones, but into an upper and a lower half, the boundary between them being determined by the deltoid ridge. The upper and more massive half is devoted to the *insertion* of the muscles which move the superior extremity on the trunk. The lower and more slender half is given to the *origin* of those muscles which flex the forearm. The above is true, of course, only of the anterior surface of the bone. Posteriorly the entire *facies* is occupied by the origin of the extensor of the forearm.

The upper half of a longitudinal section of the humerus exhibits a cylindrical form relatively of large calibre, having thin walls. The lower half is more compressed, and has thicker walls, with a diminished calibre. At the junction of these two regions the points of insertion of the deltoid and pectoral muscles give increased massiveness.

The inner wall of the bone is straight from the edge of the proximal articular surface to a short distance above the epitrochlea, where it curves somewhat abruptly inwards. The outer wall, on the other hand, is irregular. The border is divided into two concave lines separated by the deltoid impression, the upper of which may be said to be placed somewhat obliquely from above downwards and outwards.

Now, the varieties of the humerus are three in number. The first, which may be called the *inflated* humerus, is characterized by an increase of diameter of the medullary canal above the deltoid ridge, and by great thinning of the walls of the bone. The second—

the most common variance from the average bone—is the *angulated* humerus, and consists essentially in an inclination inward of the upper insertional half at an angle with the shaft. The third is the *curved* humerus, so called from the fact that the lower posterior aspect of the bone at the region devoted to the origin of the third head of the triceps muscle is markedly convex, and will not permit the ends of the bone to lie in the same horizontal plane, as can readily be seen by placing the bone by its posterior surface upon a table, when the curved shaft will at its lower half rest on the plane, while the ends, particularly the distal, will be elevated. The lateral lines seen at that part of the shaft, corresponding to the continuation of the epicondylar and epitrochlear ridges, define this region anteriorly, which is one of the most variable in the humerus. From being almost concave, with the lateral lines corresponding to the posterior border of the shaft, it may have every degree of development, the lines being compelled to occupy a more median position along the inner side of the bone, until the muscular area becomes so markedly convex as to apparently curve the bone forwards, as above noticed.

The *femur* resembles the humerus in being operated upon by two sets of muscles,—one moving the thigh on the trunk, the other moving the leg on the thigh. The relative size of the areas differs widely in the two bones. In the femur the upper third is devoted to that purpose; in the humerus it is the upper half. But, as in the case of the latter bone, the most natural division is effected by the manner in which its muscles are associated with it. The upper third of the femur differs in every respect from the lower two-thirds. It is not, however, apt to be inclined inwards, but is compressed antero-posteriorly. The almost always well-defined, rounded outer border of the shaft, which defines inferiorly the proximal third of the bone, is immediately in advance of the insertion of the gluteus maximus muscle.

I have observed in many specimens of interstitial absorption at the neck of the femur well-marked examples of this widening of the upper part of the bone.

A femur in the Wistar and Horner museum exhibits in a striking degree this peculiarity. The bone was for a long time considered to be an example of osseous union after fracture of the neck within the capsule. Upon sawing it open, I was gratified to have my suspicions of the nature of the specimen confirmed. Photographs of this bone were afterwards exhibited before the College of Physicians of Philadelphia by Dr. John H. Packard.

In the lower two-thirds of the bone the chief variation is seen in the tendency of the shaft to curve *forwards*. It is suggestive that in both humerus and femur the *extensor* surface is the one which becomes convex.

It is often said that the differences between the heights of adults are due to the variations in the lengths of their femurs. It would be more exact—granting for the nonce that the above position is correctly taken—were it expressed as follows: It is found that the *linea aspera* is of about the same length in all femurs; therefore variations in the lengths of different femurs, and conversely in the heights of individuals, are to be sought for in the portions of the shaft on the distal and proximal ends of the *linea aspera*.

The *linea aspera* is not placed directly in the middle of the shaft of the femur. It inclines either to the inner or the outer side. On the whole, it is found more commonly nearer the inner than the outer border, and the inner aspect of the shaft will often be nearly straight, while the outer is conspicuously convex.

The *cervical fossa*. Under this head may be included a shallow depression on the anterior surface of the neck of the femur, not noticed, so far as I know, by authors. The fossa is placed immediately below the articular surface, with which in fresh specimens it

is continuous, and covered with cartilage. Its size varies from that of a split pea to that of a chestnut. It is quite commonly furnished with minute openings communicating with the spongy tissue of the neck of the bone.

In a specimen of the upper third of the femur, preserved in the cabinet of the Pennsylvania Hospital as an example of osteoporosis with osteomyelitis, "so called," a sequestrum has extended from the distal end of the specimen quite up to the position of this fossa. From the relation between the sequestrum and the fossa, it would be easy to confound the latter with a product of diseased action.

SUPPRESSION OF THE SECRETION OF THE LACHRYMAL GLAND.

BY GEORGE C. HARLAN, M.D.,

Surgeon to Wills Ophthalmic Hospital.

AN Irish servant-girl, twenty-two years of age, applied at the hospital for relief from the effects of an extensive burn of the face and forehead, received seven years ago. The whole left cheek and temple and left side of the forehead were involved in the cicatrix. The lower eyelid was drawn down and everted and the punctum obliterated. The upper lid was drawn up so that the lashes occupied exactly the position of the brow at the edge of the orbit, and the whole palpebral conjunctiva was exposed. The sight of the eye was unimpaired; there was no epiphora, and the normal moisture of the conjunctiva was maintained. She suffered no other inconvenience than the great deformity, of which she was anxious to be relieved. The edge of the upper lid was freed from the orbit by an incision just above the lashes, and a new lid was formed of skin transplanted from the forehead. The operation resulted very satisfactorily. The point of special interest in the case is the fact that no injury or inconvenience followed the complete obstruction of the derivative part of the lachrymal apparatus. She stated that since the accident there had been an entire absence of tears in that eye, even when they were plentifully secreted by the other, as in crying. The function of the lachrymal gland must have been either destroyed by the direct effects of the burn, or suspended in consequence of the obliteration of the puncta: the latter seems more probable, as the position of the gland within the orbit would be likely to protect it.

It is claimed by the advocates of the operation for destroying the sac in incurable or obstinate cases of obstruction, that it is followed by a suppression of the secretion of tears; and there seems to be no good reason why an obstruction of both canaliculi should not have the same effect. This result does not always follow, however, as Laurence, Dixon, and others have extirpated the lachrymal gland for the cure of lachrymation in just such cases.

It is a well-known fact that when the lachrymal gland is removed, the dryness of the conjunctiva that might have been expected is not met with; the source of the continued secretion does not seem to be so generally known, or at least it is very rarely mentioned. The moisture of the conjunctiva under such circumstances is usually attributed to the secretion of mucus, though this is not its only or perhaps its chief source. Something more than mucus is needed, and is supplied by the small racemose glands, about forty in number, found in the connective tissue beneath the reflected portion of the conjunctiva, and with ducts opening on its free surface. Their structure is the same as that of the lachrymal gland, and they secrete true tears, and hence are sometimes called "accessory lachrymal glands."

In the case of a young lady, from the external canthus of whose eye I removed a tumor, the lachrymal ducts were unavoidably closed by the operation. Being something of a philosopher, she had no special use for her lachrymal glands for several months, and was then astonished to find that she cried with one eye only, the other not contributing a tear. There had been no unusual dryness of the eye, nor had it noticeably differed from the other in any respect. In her case, at least, and in that above recorded, it would seem that the function of the lachrymal gland had been entirely emotional, and that the tears for general purposes were supplied by the accessory glands. In the first case, the canaliculi being closed, excessive accumulation of tears was prevented by evaporation from the exposed conjunctiva.

CASES OF TAPEWORM TREATED BY KAMEELA.

BY S. R. KNIGHT, M.D.,

Superintendent of the Episcopal Hospital, Philadelphia.

EVERY physician will be found to have a sovereign remedy for tapeworm, such as kooseo, emulsion of pumpkin-seed, oil of turpentine, aromatic sulphuric acid, or oil of male-fern. My friend Dr. Edwin Morris, of Spalding, England, has used areca-nut with success. I have found kameela successful in cases occurring in my own practice in which other remedies have failed.

Mrs. A., aged fifty-six, called upon me complaining of pains in different parts of the body; she was much exhausted and emaciated. Obstinate constipation existed. She was treated at different times by means of purgatives, with liquid diet, emulsion of pumpkin-seed, oil of turpentine, and oil of male-fern, but without the desired effect, although small portions of the worm were passed. When I saw the patient for the fourth time, I ordered the following:

R Kameelæ, \mathfrak{zss} ;
Syrupi simplicis, $\mathfrak{f}\mathfrak{zj}$. M.

S.—Take a tablespoonful at a dose.

Next morning, having taken one dose, the patient passed a tapeworm fifteen feet in length. The remaining dose produced no effect. The patient recovered her health, and has remained well for two years.

Two other cases, having the same symptoms, were treated by me with kameela, and both terminated successfully.

CORRESPONDENCE.

THE COOKING OF FOOD AT A TEMPERATURE LESS THAN 100° CENTIGRADE.

TO THE EDITORS OF THE PHILADELPHIA MEDICAL TIMES.

MESSRS. EDITORS,—It is at all times a pleasure to be able to transmit to you any communication relative to the observations of our learned confrère M. Jeannel, with whose great intelligence and elegant style you have probably become familiar through the medium of the *Bordeaux Journal de Médecine*, of which he has for some years been the editor. At the last meeting of the Academy of Medicine M. Jeannel communicated the results of his observations, not, however, upon any disease or medicine, but upon the ordinary *pot-au-feu*. The subject is not a trifling one, and is not deficient in interest; and I quote as follows from his communication:

"The well-attested success of the Norwegian saucepan, which is in common use among the people of mountainous countries, where the boiling-point of water is often lower than four or five degrees below 100° C.,—the ordinary processes not being

different from those on the seacoast,—demonstrates that the cooking of food does not absolutely require a temperature higher than 100° C., or boiling at the pressure of $0\text{mm.}76$.

"The boiling-point of water diminishes about $0^{\circ}.332$ —i.e. one-third of a degree—centigrade for every one hundred metres of elevation above the surface of the sea.

"I tried first to calculate the amount of aromatic principles unnecessarily evaporated and of fuel uselessly burned when beef-broth is made at the boiling-point of water and under the ordinary pressure of the atmosphere, and, secondly, to establish the fact that meat and vegetables may be thoroughly cooked at a temperature of $+95^{\circ}$ C.

"The following table gives the elevation, the barometric pressure, and the boiling-point of water in a number of cities or inhabited places :

	Elevation.	Height of the barometer.	Boiling-point of water.
Potosí (Bolivia) . . .	4,061 m.	0.454 mm.	$86^{\circ}.2$
Quito . . .	2,908 "	0.526 "	90°
La Plata (Bolivia) . . .	2,844 "	0.530 "	$90^{\circ}.3$
Mexico . . .	2,277 "	0.569 "	$92^{\circ}.1$
St. Gothard . . .	2,075 "	0.584 "	$92^{\circ}.8$
Briançon . . .	1,321 "	0.643 "	$95^{\circ}.4$
Baréges . . .	1,241 "	0.649 "	$95^{\circ}.7$
Madrid . . .	608 "	0.704 "	$97^{\circ}.9$
Clermont-Ferrand . . .	407 "	0.722 "	$98^{\circ}.6$
Geneva . . .	375 "	0.725 "	$98^{\circ}.7$

M. Jeannel draws the following conclusions :

"1. The boiling of water in which meat is cooked to make broth, or in which vegetables are prepared for the table, has no advantage other than that of showing, by the escape of steam,—a phenomenon which attracts the attention even of the most ignorant,—that the fire is sufficient to insure the cooking of the food; but, on the other hand, continued boiling during the process of cooking has two disadvantages : First, the aromatic principles carried off by the steam are dissipated in the atmosphere, and the flavor of the food is thus diminished. Secondly, a very considerable amount of fuel is wasted.

"2. Meat and vegetables, either fresh or desiccated, can be cooked at a temperature of $+95^{\circ}$.

"3. Cooking at $+95^{\circ}$ requires a little more time than cooking at the boiling-point under the pressure of $0\text{mm.}76$, in the proportion of sixteen to fifteen or fourteen for beef broth, and in that of about five to four for potatoes or desiccated vegetables.

"4. As regards the consumption of fuel, there is an economy of about forty per cent. when the cooking is done in an ordinary stove.

"5. The broth and the meat are much more palatable when they have been cooked at a temperature of $+95^{\circ}$ and without more boiling than is necessary for scumming, and for this purpose the term of boiling need not exceed fifteen minutes.

"6. By cooking at $+95^{\circ}$ the yield of the cooked meat is increased by from three to six per cent.

"7. By cooking at $+95^{\circ}$ the yield of broth is increased ten per cent., so that the same quantity of broth may be obtained as when the temperature is raised to 100° , with ten per cent. less water.

"8. It would be easy for the head cooks in large establishments (hospitals, barracks, etc.) to regulate the temperature in their saucepans by means of thermometers and registers. Where the cooking is done by gas, this would be exceedingly easy.

"9. The thermometer (which should be of the description

used by sugar-refiners and brewers, and which may be obtained of any of the opticians in Paris) should be protected from injury by being encased in a fenestrated covering of metal, leaving the scale uncovered at the upper part, so that when the thermometer is hung by a hook to the edge of the saucepan, its scale can be seen through an orifice or a notch made in the lid. The damper of the stove should be shut as soon as the temperature approaches $+100^{\circ}$, and opened whenever it tends to fall below $+95^{\circ}$."

NOTE.—After skimming the *pot-au-feu* and adding vegetables and spices, the boiling saucepan should be placed in a box, the inside of which, as well as the cowskin lid, is lined with a layer (ten centimetres in thickness) of coarse woollen stuff. Thus shut up in a non-conductor of heat, the saucepan cools very slowly. At the end of five minutes the temperature of the water is still $+70^{\circ}$, the bouillon is made, and the meat, vegetables, and spices are cooked without the loss of any of their aromatic principles by evaporation. Such is the Norwegian saucepan, the use of which cannot be too highly recommended.

"I learned, and not without great surprise, the day after making my present communication," says M. Jeannel, "that an official commission, appointed by a minister some years ago to examine the Norwegian saucepan, reported that the meat was not cooked by it. My personal experience with it does not warrant this conclusion. At all events, the force of my arguments does not depend on the success of the Norwegian saucepan."

With great respect, etc.

DR. FORT,

Professeur libre d'Anatomie.

STYPTIC COTTON.

TO THE EDITORS OF THE PHILADELPHIA MEDICAL TIMES.

MESSRS. EDITORS.—In the September number of the London *Pharmaceutical Journal* for 1870 there is an extract from the *Schwabischer Merkur*, written by Dr. Ehrle, of Isny, in which he gives the following formula for the preparation of the cotton :

"Take cotton of the best quality; boil in a weak solution of soda (four per cent.) for about an hour; wash with cold water; press out and dry. Then steep the cotton in a solution of the chloride of iron (diluted one-third); press and air-dry; after which pick to pieces."

This prepared cotton is of a yellowish-brown color, and requires to be kept protected from the air, as it absorbs moisture very rapidly, owing to the deliquescent character of the iron-salt which it contains. Having prepared some for experiment a few months ago, after using it for a time it occurred to me that if the sol. ferri subsulph. were used in its preparation instead of the sol. ferri chlor., a superior article would be made, inasmuch as the cotton would not then absorb moisture, and would not need the care to protect it which this did. I made some accordingly, and found it quite as efficient a styptic, and entirely free from the objection referred to.

By the sample which I herewith send you, it will be seen that it is of a light straw color and perfectly dry to the touch. It is easily carried and ever ready for use. It acts chemically and mechanically,—chemically through the iron-salt which it contains, and mechanically by means of its bulk and closely-packed fibres. It has been in constant use at the St. Mary's Hospital for some months, and is looked upon by the surgeons there as a valuable addition to their armamentarium. The

many instances in which its valuable aid may be called upon will suggest themselves to the surgeon and obstetrician, and need not, therefore, be specified here. While there is nothing new in presenting either of these iron-salts as a styptic, yet I think the profession indebted to Dr. Ehrle for the idea of putting them in a much more available and efficient form.

Respectfully yours,

JAMES CUMMISKEY.

PHILADELPHIA.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

CLINIC FOR DISEASES OF THE SKIN, DECEMBER 6, 1871.

SERVICE OF DR. LOUIS A. DUHRING.

Reported by Dr. Arthur Van Harlingen.

HERPES ZOSTER.

IN introducing this case the lecturer premised that, in the examination of diseases of the skin, diagnosis should be made from the appearances presented to the eye, and not from the statements of the patient.

In the study of this patient, an engine-driver, aged 35, the first thing that strikes one is the situation of the eruption. It is on the trunk, which it about half encircles. It consists of an aggregation of pea-sized vesicles and pustules. It can be seen that it is of some days' duration, for here are crusts which have taken some time to form; it may have been one or two weeks since it first made its appearance.

The affection before us may be mistaken for one of several different diseases. If you only saw a small portion of the eruption in certain parts, it is possible you might be inclined to pronounce the affection dermatosyphilis. You would be still more likely to form such an opinion if you had listened to the statement which the patient has just volunteered,—namely, that he contracted venereal disease some time ago.

Eczema in some of its forms bears a strong resemblance to the disease before us; but, without going any further, we may say that we have here neither the one nor the other of the affections mentioned, but simply what is known as herpes zoster.

The history of these cases is so characteristic that, had we not decided to make our diagnosis from the appearances alone, the account which the patient gives of the course of the disease would alone have indicated its nature. He says that it has lasted about ten days,—that it began by a fearful stinging and burning pain in the part, so severe that he was obliged to desist from work.

This lasted three or four days; then the eruption commenced coming out, and the pain in a measure subsided, the disease from this time tending to recovery, until it has reached its present condition.

Herpes zoster when at its height is characterized by the appearance of an aggregation of vesicles closely resembling clusters of pearls upon a red base. The case before us is by no means typical in its aspect, for, while under ordinary circumstances the vesicles of zoster gradually become desiccated, in the present instance many have developed into pustules, and some have broken down, forming small ulcers.

One of the characteristics of zoster is pain occurring early in the course of the disease, and usually following the direction of some particular set of nerves, the eruption, when it subsequently appears, being, as a rule, distributed over this tract.

The name zoster or zona was given to this affection on account of the belt-like arrangement which it was frequently found to assume. It very unusually, however, encircles the entire body, but more commonly a lateral half. It is not, moreover, confined to the trunk, but may occur on the face, scalp, or limbs. It very rarely attacks the same subject twice; though cases are on record where frequent recurrences have been observed.

The treatment is in most cases simply palliative, as the

disease, having run its course, spontaneously tends to recovery. Had I seen this patient earlier, I should have ordered him the following prescription as a local dressing:

R Unguent. Zinci oxyd. benzoat., ʒij;
Glycerinæ, ʒiv.

Misce. Sig.—Apply morning and evening.

In many cases we may make use of simple starch flour dusted over the vesicles to prevent the oozing subsequent to their rupture, often due to friction against the clothing.

[Dr. Duhring here incidentally remarked that it was just in this class of cases that homœopaths claimed success for the treatment of diseases of the skin.

As is well known, this affection runs a course ending in spontaneous recovery without treatment; and here the homœopaths give their "dilutions," claiming a specific action for their drugs, and getting at times the credit of a wonderful cure. But in the treatment of zoster we find that no medicine possesses any influence in averting or changing the course it usually runs, and the patient recovers in the same manner whether he takes this or that medicine, or none at all.]

ECZEMA PAPULOSUM.

B. D., aged 60, bobbin-winder. When you observe, as in this case, the patient's body covered with scratch-marks, it is unnecessary to inquire whether the disease is accompanied by itching; for the effects are always visible.

Scattered over her legs and thighs are reddish papules. On picking up the skin at these points it is felt to be quite indurated. On the arm a number of these papules are confluent, forming a patch. The patient states that no fluid has at any time escaped from them.

The duration of the affection has been about a year, and during the last few months these dark-brown elevations which are scattered over the surface of the leg have appeared.

These last, which are somewhat elevated, resemble the crusts formed by the desiccation of some serous or purulent exudation. This affection is, then, a dry eczema of the papular form, and though in the present instance unaccompanied by discharge, yet if the eruption were kept in a state of irritation by frequent washing in soap and water it would develop into a well-marked case of wet eczema.

The elevations of which I have just spoken are nothing more than collections of hypertrophied papillæ covered with sebum,—in other words, warts. As regards treatment, we should employ in the present instance no active local measures. Such a course would just now be quite out of place. Part of her troubles are no doubt the result of bad health; and I shall consequently put her on a course of ferruginous tonics, together with cod-liver oil.

To allay the itching of which she complains, I shall direct her to dissolve a powder of carbonate of soda, containing two ounces, in about twenty gallons of water, to be used as a bath morning and evening, remaining in it about twenty minutes.

CONDYLOMATA OF THE LIP.

R. F., aged 25, police-officer. The growth which you observe on this man's upper lip has existed for the last six months.

At first sight we might be inclined to pronounce it an epithelioma; but a more careful examination will convince us that we have to deal with an hypertrophy of the papillæ, sometimes called vegetations, or, in other words, a collection of acuminated warts.

Vegetations are generally supposed to be connected with syphilis, but in the present instance this is not the case. Even when we find warts occurring upon the genitals, we are not justified in pronouncing them syphilitic in their origin.

Nor must you confound the disease before you with a *plaque muqueuse*, or mucous patch, which to a certain degree it resembles.

This patient has been ordered the following preparation, which is applicable when we desire a mild caustic, and is known as Rochard's ointment:

R Iodini pulv., gr. viij;
Hydrarg. Chlor. mit., ʒj;

Adipis, ʒij.

Misce. Fiat unguentum.

Under the use of this ointment the hypertrophied papillæ are disappearing, and in a short time will be entirely gone. Should the ointment, however, prove too mild to effect our purpose with sufficient rapidity, we may resort to the use of potassa fusa, argenti nitras fusa, or chromic acid.

[The Rochard's ointment proving slow in its action, the daily application of argenti nitras fusa was commenced a few days later, under the use of which the growth rapidly disappeared, and the patient has since been discharged, cured.—A. V. H.]

ACNE PUSTULOSA.

P. M., aged 50, rag-picker. This disease is a chronic one. The patient tells us he has had it about a year.

This fact at once excludes the idea of its being the eruption of variola, to which at first glance it bears a close resemblance.

Another affection for which it may be mistaken is a pustular syphilitic disease of the skin, which it also resembles. But were it the latter we should find it probably involving the scalp, which in the present instance is not the case.

Having eliminated variola and syphilis, we have but one disease remaining: this is acne.

We have here an aggravated form of this affection; for you will not often see a case where the disorder has made such marked progress. A peculiar feature is the age of the patient, —fifty years. Acne is a disease of the young, not ordinarily occurring in persons over twenty-five. In the present instance the affection is probably due to ill health, an acne cachecticum so called, and if we build up this man's system we shall do much towards the cure of the disease.

The eruption is the product of a low, vitiated state of the secretions; and in this connection you will notice the tendency to the formation of small abscesses at various points, a symptom not characteristic of most kinds of acne. The one before us is the slow pustular variety, not resembling the ordinary acne punctata.

I shall order this man to apply the unguentum diachyli, of which I give you the formula, taken from Hebra, as it is not official, and you will not be likely to find many apothecaries who keep it on hand:

R Olei Olivarum opt., $\mathfrak{z}\text{xv}$;

Lithargyri, $\mathfrak{z}\text{ij}$ — $\mathfrak{z}\text{vj}$;

Coque; dein. addi

Olei Lavandulæ, $\mathfrak{z}\text{ij}$.

Misce. Fiat unguent.

An attempt to apply any more stimulating ointment in a case of this kind would bring out new pustules and make matters worse.

In addition to the external application, I shall order this man the following:

R Ferri et Ammoniac citrat., $\mathfrak{z}\text{j}$;

Liquor. Potassæ arsenit., $\mathfrak{f}\mathfrak{z}\text{ss}$;

Tinct. Cinchonæ comp.,

Syrupi simplicis, \mathfrak{aa} , $\mathfrak{f}\mathfrak{z}\text{ii}$.

Misce. Sig.—Teaspoonful after each meal.

The arsenic is given, not with a view to any specific effect to be expected from it, but merely as a general tonic, and, as you see, in small doses. Besides the iron and arsenic, I shall order the patient cod-liver oil.

SERVICE OF DR. GEORGE STRAWBRIDGE.

CLINIC FOR DISEASES OF THE EYE, DECEMBER 7, 1871.

Reported by Dr. Charles B. Nancrede.

DR. STRAWBRIDGE opened the clinic by some preliminary remarks concerning the appearance, size, and ultimate structure of the crystalline lens. He demonstrated by aid of a model the unequal curvatures of this body, showing that the posterior surface had much the greater convexity. He also gave in this connection the average size of the lens, stating its diameter to be about $3.5'''$, and that this fact was of great value in determining the size of the incision for its extraction, as, to allow such a body to pass with ease, the opening must be from $4'''$ to $4\frac{1}{2}'''$.

The lecturer next proceeded to explain the structure of this portion of the refracting media, saying that by boiling we could cause the lens to break up into three triangular segments, which could readily be means of needles be split up into laminae. Further, he stated that on viewing a horizontal section under the microscope we could easily perceive that it consisted of tubules, which when seen transversely divided were polygonal in form. The minute structural elements were then shown to the class under the microscope, the specimen being the crystalline lens of a bullock, which the lecturer said was similar in structure to that of man.

Before introducing the cases, Dr. Strawbridge referred to the different varieties of cataract, which he had described more minutely at a former lecture, especially the soft and hard, examples of which he intended showing the class. He next gave the diagnosis between simple and complicated cataract, urging the absolute necessity of this before attempting to operate.

A cataractous eye fit for extraction should answer to the following tests: First, that a candle-flame should be distinctly seen at a distance of eight to ten feet, and that the patient should be able to tell when the hand, or any other object, passed before the flame; second, that the periphery of the retina should be proved to be sound by the *direction* of the flame being clearly pointed out when moved up or down, to the right or left; and, thirdly, he mentioned another test as to the integrity of the retina, viz., photospheres, or that when the eye is pressed upon by any object, as a pencil, or the finger-tip, there should be colored rings seen projected in a direction opposite to the point of pressure. For instance, if pressure be made upon the outer portion of the globe, the photospheres will be seen to the inner side, and *vice versa*. This is owing, the lecturer further explained, to excitation of the rods and cones of the retina by the pressure, and their projecting the image in the line of their axes, therefore away from the point of pressure; consequently the image is seen on the opposite side of the eye.

The patient, J—, was then shown to the class. In accordance with the above principles, Dr. Strawbridge remarked that the patient had but one eye fit for operation, but that unless he had tried the above tests the unsound eye might have been operated upon and extraction most successfully performed, and yet the eye have proved totally useless from almost entire destruction of the function of the retina. The right eye, however, was without any complication.

The next patient shown furnished a beautiful example of a laminated soft cataract, giving a milky-clouded appearance behind the pupil. This case had been operated on by the needle for solution a week previously. It was probably congenital, and would require five or six more needle-operations for its complete removal.

Dr. Strawbridge then said, "Gentlemen, the operation I propose performing to-day is that of Von Graefe, and is represented in its different stages in the diagrams before you. The knife is, as you see, long, narrow, about a line and a half in breadth, and its point is to be entered in the sclerotic about half a line from the cornea. It is then to be directed downwards towards the centre of the pupil, until its point has advanced about $3.5'''$, when it is to be carried directly across, and the counter-puncture made at about the sclero-corneal junction, making an incision of from $4'''$ to $4.5'''$, $3.5'''$ of which will probably lie in the cornea, the remainder in the sclerotic.

"The second step is the iridectomy, as you see represented in the second drawing. I would remark in this connection that one of the class asked me the other day why the iris was cut off, and I would now reply that it is from necessity, as, owing to the peripheral nature of the incision, the iris will prolapse. I would advise the iris to be severed rather by several cuts of the scissors than by one, as thereby it will be removed closer to its ciliary attachments. By all means, now use this tortoise-shell curette, tapping the cornea gently, to cause the iris to contract, and thus clear the track of the wound. In the third diagram you see the capsule being lacerated by the cystotome, which I here show you. This is to be introduced gently between the lips of the incision, well down to the lower border of the iris, the point then turned against the capsule, which is to be lacerated by two longi-

tudinal strokes on each side, and completed by one or more transverse ones. Now we are ready for extraction, which is to be performed thus: The convexity of the shell-scoop is to be gently pressed against the lower portion of the cornea in a direction backwards and upwards, when the lens will in most cases readily slip out.

"The great danger in all cases of extraction is from prolapse of the vitreous humor, owing to rupture of the ciliary ligament, as, from disease of this structure, the gentlest pressure will sometimes break it. Again, this accident may be owing to a watery condition of the vitreous, so that everything gushes out when the least pressure is made. In such cases there is no use in persisting in the attempt to extract by continued pressure, as this only makes matters worse, since the lens is the most resisting portion. The instrument that I show you, a flat scoop, should be gently introduced behind the lens until it reaches its inferior border, when it is to be carefully lifted out. If all goes well, when the extraction is completed, bandage the eye carefully with a flannel roller. By all means see your patient the same evening, when, even if all is well, he will probably complain of slight burning pain or discomfort in the part. If this be excessive, open the eye a very little, to allow any aqueous humor to escape that may have collected. If the pain prove still more intense, with considerable ciliary neuralgia, give a hypodermic injection of morphia. If still worse again, with swelling of the lids, and great pain, either a few leeches or moderate venesection will be proper.

"Some recommend, especially Von Graefe, that if any trouble of this kind occurs within the first twelve or fifteen hours, when there is always most danger, the outside of the lids should be painted with a strong solution of nitrate of silver, or that the solid stick should be applied, and afterwards neutralized with common salt. If, worst of all, suppurative of the cornea supervenes, remove the bandage every three or four hours and bathe the eye for a few minutes with warm chamomile tea, and give good food, tonics, etc. These cases generally do badly.

"Be careful never to give a favorable prognosis in cataract cases, as patients will expect four times as much as you promise. You can tell them that there are nine chances to one in their favor. The patient before us can console himself with the fact that in his present condition his eye is useless for vision, so that even with a bad result he will be no worse off than at present, while he has nine chances to one of success."

Dr. Strawbridge then proceeded to extract, with perfect success. The cataract was a little over-ripe, and he remarked that when there remained behind any of the cortical substance, the best way to remove it was by gently rubbing the closed lids upwards in the direction of the incision. Immediately after the operation, although before it the patient had to be led into the amphitheatre, he could count fingers easily at a distance of two or three feet.

JEFFERSON MEDICAL COLLEGE.

SURGICAL CLINIC OF PROF. S. D. GROSS, DEC. 6, 1871.

Reported by Ralph M. Townsend, M.D.

LITHOTOMY.

A BOY, aged 10 years, from Scranton, Pa., was sent to the clinic on November 1, to be treated for irritable bladder. After the usual interrogation, it was concluded that the patient suffered from urinary calculus, and with a view of determining this a few whiffs of chloroform were administered, and a sound introduced into the bladder. No stone was revealed. Prior to subsequent examinations the boy was placed upon the following treatment:

R Uvæ Ursi, ʒij;
Sodæ Bicarb., ʒiij. M.

S.—Add to one and a half pints of boiling water, and take a wineglassful two or three times daily.

As the patient had been the subject of pain for nearly nine years, and as the operative procedures just instituted would doubtless augment the same, after recovering from the influ-

ence of the chloroform, twenty-five drops of laudanum were ordered as an injection; and the patient was also directed to have ten grains of Dover's powder at bedtime.

November 4.—A day after the adjournment of the last clinic, Prof. Gross, with the aid of a larger sound, succeeded in finding a calculus; and to-day the boy is again brought before the clinic for the purpose of having performed the operation of lithotomy.

Many operations for stone in the bladder have been devised, as the lateral, bilateral, median, medio-lateral, recto-vesical, and supra-pubic. The former of these was selected for this case, being characterized by the operator as the perfection of lithotomy.

The patient had been subjected to a certain degree of preparatory treatment, such as perfect rest, a good aperient, and retaining his urine for a certain number of hours previous to the operation.

Upon being fully under the influence of chloroform he was drawn to the foot of the table, the legs flexed, and the thighs widely separated by two assistants. A staff, twelve inches long, with a good wide groove, was then introduced into the bladder, and so held that while the handle should incline towards the right side, it should simultaneously form a right angle with the trunk. The curved portion of the staff was held closely up against the pubic symphysis, the staff-holder standing on the left side of the patient, and with his disengaged hand holding the scrotum out of the way.

The index-finger of the operator was then well oiled and introduced into the rectum, for the double purpose of causing its muscular fibres to contract, and at the same time to ascertain accurately the bearings of the hidden surroundings,—to sound the parts as it were. The knife was then entered by the side of the raphé, on the left of the perineum, about an inch above the margin of the anus, and carried obliquely downwards and outwards, between the anus and the tuberosity of the ischium,—the length of the incision being about two and a half inches. The incision was carried down to the membranous portion of the urethra, a little in front of the prostate gland. The index-finger of the operator's left hand was then introduced in the gap, as a searcher for the groove on the staff. The knife, guided by the finger, was now introduced into the groove of the instrument, and carried on, through the left lobe of the prostate, into the bladder, care being taken not to carry the incision too far back, for fear of wounding the venous plexus at the base of the bladder, or of penetrating the reflection of the pelvic fascia.

A gush of urine followed the opening of the bladder, the knife and staff were both withdrawn, and the forceps were introduced into the bladder through the wound, being guided by the index-finger, which latter had not been withdrawn since its first insertion. The gush of urine having forced the stone down against the artificial opening, it was readily grasped, and without difficulty withdrawn.

The calculus was of the form of a flattened oval, brown in color, and possessed of a smooth surface. It belonged to the prevailing species of formations of this kind, consisting principally of lithic acid.

The external perineal artery, and several of the smaller perineal vessels, required ligation. A sponge, secured by a piece of twine tied around the thigh, was plugged in the wound, and retained at different intervals, for forty-eight hours. Dr. Physick wounded the internal pudic artery in the first case of lithotomy he had, and the accident induced the train of thought which resulted in the invention of the curved forceps and needle to ligate injured arteries when deeply seated.

November 25.—This little patient was brought before the class for the last time preparatory to being taken home. His wound is almost closed, and all the water escapes by the natural channel. Briefly, his after-treatment was as follows: After the extraction of the stone the bladder was well syringed out, and then the patient was put to bed and given a full anodyne. Little attention was paid to posture, the assuming of that which seemed the most easy being allowed. The diet for the first few days was light and unirritating, consisting principally of rice, crackers, toast, and tea. A dose of castor oil was given at the end of the first week. The urine commenced to pass off permanently by the urethra about the fifteenth day after the operation.

OTORRŒA.

Carrie M., aged 17 years, had a polyp removed from her ear six months ago, but has suffered with a discharge from her ear since she was a year old. The discharge is very offensive.

This is a disease most common in strumous subjects, or those whose system is connected with a peculiar taint. It is an affection that soon becomes obstinate to the parts, and is extremely difficult to dislodge, continuing for months, and in its course destroying the tympanum, the bones of the ear, and portions of the temporal bone; and ultimately the membranes of the brain may be attacked, and death result.

For examining the ear, Wilde's or Toynbee's speculum, Miller's lamp, or the apparatus devised by Dr. Grant, of New Jersey, may be used.

Examination of this patient reveals the membrane of the external auditory meatus much thickened, and the floor of the meatus bathed with a thin, watery discharge. There is a good deal of epithelial matter in the tube, whereby the light is prevented from falling upon the bottom of the ear. The treatment in a case of this kind should be steady and long-continued.

The general health in this case is undermined, the patient suffering greatly with headache on the affected side.

After the ear is well washed out with tepid water, the following solution will be applied with a camel's-hair brush, once daily, until the discharge is materially lessened; and after that every third or fourth day, as the case may require:

R Argent. Nit., gr. x;
Aq̄æ, fʒj. M.

A blister will also be applied behind the ear, to be renewed every eight or ten days.

This patient will also take in pill form three times daily,—

R Ext. Cinchonæ, gr. ij;
Ferri Iodid., gr. ½;
Hydrarg. Chlor. corros., gr. ʒi. M.

The diet will be unstimulating, yet at the same time nutritious and easy of digestion. All red meats and coffee should be forbidden; but oysters, eggs, poultry, milk, tea, stale bread, and fresh fruits may be liberally partaken of. The patient will also take ample exercise in the open air, guarding herself from cold by wearing flannel next to the skin.

POTT'S DISEASE.

Alfred B., aged 5 years, is hump-backed, has been in this condition for two years, and has never been confined during all that time! This case and its already deplorable results should be photographed on every observer's brain, for this child is crippled for life, and is a monument no less to bad treatment than to want of common sense. No doubt this little sufferer in the incipency of his trouble presented all the signs and symptoms so characteristic of his complaint,—a little projection under the skin of one of the spinous processes of the affected vertebræ, slight increase of abdominal prominence, and a halting gait or walk, very much like that of a chicken in hot weather when its wings droop and its mouth hangs open.

This condition depends upon disease of the bodies of the vertebræ,—usually the dorsal. The affection is essentially of a scrofulous character, or is a remote outgrowth of a syphilitic state of the system.

Confinement in the recumbent posture, as soon as the nature of the disease is recognized, must be insisted upon, the patient not being permitted to rise either to void his secretions or for any other purpose.

When the child is robust, the lecturer said, he sometimes promoted pyogenic secretion by the application of the actual cautery. In anæmic or asthenic cases the tincture of iodine would be more relied upon. A cure is ultimately affected at the end of seventeen, eighteen, or nineteen months, by the absorbents taking up the diseased structure, and an effusion of plasma bridging over the resulting gap. When the boy rises from his bed, he must wear an apparatus to bear the weight of his head and shoulders.

OBSERVATIONS ON THE RED BLOOD-CORPUSCLE.—Dr. E. Ray Lankester (in the *Quarterly Jour. of Micr. Science* for October, 1871) presents a series of experiments chiefly with regard to the action of gases and vapors on the red blood-corpuscle, and concludes that the red blood-corpuscle of the vertebrata is a viscid and at the same time elastic disk, oval or round in outline, its surface being differentiated somewhat from the underlying material, and forming a pellicle or membrane of great tenuity, not distinguishable with the highest powers (while the corpuscle is normal and living), and having no pronounced inner limitation. The viscid mass consists of (or rather *yields*, since the state of combination of the components is not known) a variety of albuminoid and other bodies, the most easily separable of which is hæmoglobin; secondly, the matter which segregates to form Roberts' macula; and thirdly, a residuary stroma, apparently homogeneous in the mammalia (excepting so far as the outer surface or pellicle may be of a different chemical nature), but containing in the other vertebrata a sharply defined nucleus, this nucleus being already differentiated but not sharply delineated during life, and consisting of (or separable into) at least two components, one paraglobin, precipitated by CO₂, and removable by the action of weak NH₃; the other pellucid and not granulated by acid.

The chemical differentiation of the outer pellicle is rendered probable by the behavior of the corpuscle under weak NH₃, which appears to dissolve this pellicle, and so loose the viscid matter from that which restrained it to its oval shape; also from the inability of CO₂ to act on the corpuscle until it has been subjected to the influence of aqueous vapor, which may be supposed to remove or render permeable this pellicle; also from the action of chloroform, oil, and cyanogen, which cause the discharge or diffusion of the hæmoglobin from the corpuscle, perhaps by first removing or rendering permeable—at any rate modifying—this outer pellicle.

Steam, chloroform, benzene, bisulphide of carbon, ammonia, and cyanogen act on the red corpuscle so as to cause the escape of the hæmoglobin.

The further action of these reagents causes the elimination of what may be called Roberts' constituent, that which is stained by magenta and set by tannin.

A still further action of chloroform, of water, or of ammonia dissolves first the stroma, lastly the nucleus.

Carbonic oxide and sulphuretted hydrogen produce their respective changes on the hæmoglobin as demonstrated spectroscopically without altering the form of the corpuscle, merely affecting the radiation of its body.

THE VARIATIONS IN THE COLOR OF CERTAIN FISH.—M. George Pouchet (*L'Institut*, November 1, 1871) believes that the physiological mechanism by which certain fish take the color of the bottom on which they live, has its centre in the brain, and is set in motion by the impressions made upon the retina by the circumambient medium. The fish does not assume precisely the color of the bottom or of the medium in which it lives, but it has the power of adapting the color of its surface to the tone of the medium. These changes may be made in a few minutes, and are due to the contraction or dilatation of pigment cells (chromoblastes) scattered under the skin of the animal, the former making it light, the latter dark in color. If the eyeballs be removed, the fish loses this power, and assumes an intermediate shade. The section of the spinal cord seemed to exercise no influence upon this function, but, on the other hand, the division of the trifacial was immediately followed by paralysis of the chromoblastes of all parts of the head under the influence of this nerve. A similar result followed the section of the spinal nerves, and it was possible in this way to give a zebra-like appearance to the fish. The destruction of the grand sympathetic nerve at a point in its course in the lower part of the spinal column gave rise to an immediate paralysis of all the chromoblastes in the skin behind this point, and during the few days that the fish operated upon survived the operation, it was half black and half light-colored. The paralysis caused by the section of the trifacial or spinal nerves will persist for weeks.

REMOVAL OF THE TONGUE.—Mr. MacGillivray, Surgeon to the Bendigo Hospital (*Medical Record*; from the *Australian Medical Journal*), reports the successful removal of the whole tongue for epithelioma.

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EDITORIAL.

CONDURANGO.

CONDURANGO was first brought to the notice of the medical profession last April by Mr. Fish, the Secretary of State, who, in consequence of representations as to its usefulness in the treatment of cancer, syphilis, and other diseases, made to him by Señor Flores, the Minister of Ecuador at Washington, and corroborated by Mr. Wing, our Chargé-d'Affaires at Quito, sent a sample of it to Mr. Robeson, the Secretary of the Navy, with the request that he would "cause it to be administered by the Medical Staff of the Navy." At the same time a quantity of it was sent to New York surgeons, in order that its value as a remedial agent might be tested by them. Although we are disposed to question the right of Mr. Robeson, or of any other civil officer without medical education and uninformed as to the therapeutic properties of drugs, to cause any medicine to be administered by the Medical Staff of the Navy, or by any other body of medical men, we pass this question by, as unimportant to the end we have in writing this article, which is to show that all, with the exception of one physician,—and he has a large pecuniary interest in the sale of the drug,—who have treated cases of cancer with condurango, have declared that the disease is uninfluenced by it.

So far as we have been able to learn, no report has been made by the surgeons of the navy; and the report made by the New York surgeons has been withheld from the public by the Department of State at Washington, but it is very well known to be unfavorable. More recently, however, the remedy has been extensively prescribed, both in this country and in England, by physicians well qualified to judge of its medicinal virtues, all of whom, except Dr. Bliss, declare that it is worthless so far as the treatment of cancer is concerned.

In an article which was published in the *New York Medical Journal* for July, a synopsis of which was given in the Miscellany of this journal for August 1, Dr. Bliss reported three cases of cancer in which he asserted that great improvement had followed the use of condurango; but we remember having thought at the time we read the article that it had been written rather with the view of impressing the laity than of laying before the profession the results of careful observations.

Choosing for the subjects of two of his experiments the mother of the Vice-President and the wife of the Secretary of the Senate, and for the third a lady in Washington, he gave their names in full; and in one instance, instead of giving in his own words the account of the improvement that is said to have taken place, he inserted into his article a letter, written by the husband of the lady, and, of course, more intelligible to people generally than the technical description by a physician. It is, therefore, not improbable that even at this time Dr. Bliss thought of abandoning his profession and of engaging in commerce. He appears to have secured the monopoly of the article, which he is still able to sell at extortionate prices, for there are many persons in this community who have heard only the favorable reports in regard to it, or, sharing the vulgar prejudice that physicians are jealous of one another, believe that the writers of unfavorable reports are influenced solely by an ungenerous feeling towards Dr. Bliss, who it is thought has a *good thing*. To such persons we would say that at least four deaths from cancer treated with condurango, including one of Dr. Bliss's own patients, are known to have taken place.

We do not doubt that Secretary Fish was actuated by the best motives in attempting to introduce condurango into this country, and it is even possible that he may have thought he had discovered a specific for the numerous morbid processes included under the general term of cancer; but we think it is now full time that he had published all the reports in his possession, of whatever character they may be, since by their suppression he appears to be extending the patronage of the State Department to those who are taking advantage of it to enrich themselves.

LEADING ARTICLES.

THE DEATH-ROLL OF 1871.

WITH the happy, joyous greetings of the New Year mingle tender sentiments of respect and admiration, as we pause to pay a tribute to the memory of the honored dead of 1871. If we believe, with the great novelist, whose own recent loss cast a gloom over the civilized world, that "of every tear that sorrowing mortals shed on such green graves, some good is born, some gentler nature comes," may we not hope that such kindly influences will permanently bless the profession which in their lives they adorned and illustrated?

In *January* last, on the first day of the year, died at Philadelphia, where for many years he had lived in retirement from professional labor, at the age of 76, one of America's most distinguished surgeons of a third of a century ago, Dr. JOHN RHEA BARTON. To all students and practitioners of surgery especially the remembrance of his achievements in the art in which for too brief a period he shone so brilliantly will be perpetuated in the fractures and bandages to which his name has been prefixed. About the middle of this

month also died, at the early age of 29, Dr. EDWARD RHOADS, the first editor of this journal, around the memory of whose moral worth and professional excellence affectionate associations still warmly cluster. Dr. GEORGE T. ELLIOT, Professor of Obstetrics and Diseases of Women and Children in the Bellevue Hospital Medical College, and a well-known practitioner, writer, and lecturer on subjects to which he brought the benefit of his professional skill and culture, also died in January, at the age of 43. The name of Dr. THOMAS MAYO, aged 81, at one time President of the Royal College of Physicians of London, and the author of valuable contributions to medical literature, and medical psychology especially, may also be added to the obituary list of this month. His chief productions were the "Elements of the Pathology of the Human Mind," "Clinical Facts and Reflections," and one or two works on "Medical Testimony."

Chemistry lost in *February* one of its most distinguished exponents, Dr. JAMES SHERIDAN MUSPRATT, at the age of 50. Originally a pupil of Liebig, he afterwards became Professor of Chemistry in the college he himself founded at Liverpool, England, and the author of a "Dictionary of Manufacturing Chemistry" and other valuable works. The well-known and very successful lithotomist, WILLIAM KEITH, of Aberdeen, aged 68, whose experience in this specialty was probably greater than that of any other surgeon of his day, died about the same time. In addition to his principal essay on "Lithotomy" and his practical contributions to periodical literature on the same subject, he published, in 1867, in conjunction with Dr. Pirrie, a small work on "Acupressure." It is seldom that we are called upon to record the loss of so many-sided a physician as Dr. JOHN ADDINGTON SYMONDS, of London, aged 63, formerly President of the British Association, who was not only learned in the profession of his choice; but was also a classical scholar of rare attainments, equally at home in the florid walks of general literature and in the no less attractive paths of medical science. Dr. HIP-POLYTE ROSSIGNOL, aged 54, Professor of Legal Medicine, Toxicology, and Operative Medicine in the University at Brussels, better known on account of his valuable investigations on the structure of the lungs and the pathology of asthma, also died in February. The death of Dr. ALBRECHT WAGNER, of Prussia, like that of the distinguished Niemeyer a month later, resulted from disease contracted in the service of his country. He was the author of works on "The Process of Repair after Resection and Extirpation of Bones" (a translation of which by Mr. T. Holmes was published by the New Sydenham Society in 1859), "Resection of Nerves," "Hydrophobia," etc.

On the 14th of *March* died at Tübingen, in the fifty-first year of his age, the distinguished scholar and clinical teacher, FELIX VON NIEMEYER, one of the great representative medical men of modern Germany. The immense amount of overwork inseparably associated with his responsible services in the late European conflict rapidly told upon a constitution already weakened

by ardent devotion to the labors of his profession. Commencing his career as an author during the cholera epidemic of 1848-49, he in 1858 published his great work, "Lehrbuch der speciellen Pathologie und Therapie," which at the time of his death had passed through eight editions. A translation of his "Clinical Lectures on Pulmonary Consumption" was published by the New Sydenham Society in 1870. He was at the time of his death Professor of Clinical Medicine in the University of Tübingen, and was celebrated for his instructive, practical, and suggestive clinical researches and teachings. His name will be permanently associated with the history of the advancement of clinical medicine which has made the last decade memorable. Professor BAUMÈS, of Lyons, aged 79, who also died in March, was famous about thirty years since as the opponent of Ricord, and his views on venereal diseases were embodied in a work published in 1840, entitled "Traité des Maladies vénériennes," which gave him a great deal of prominence on account of the collision in which it brought him with the opinions of that distinguished specialist. He was also conspicuous as a clinical teacher and practitioner; and by his "Traité des Maladies de la Peau," published in 1843, he still further increased his reputation as a pathologist. Professor PIETRO LAZZATI, of Milan, was in his lifetime the ruling spirit of the great Lying-in Hospital of that city, and one of the shining lights of the Italian school of obstetrics. He was the author of several valuable monographs, the best-known of which is that on "The Mechanism of Labor by the Shoulder," which has been described as "a picture from life drawn by the hand of a master." The sudden death of Dr. CHARLES MEYER WETHERILL, the very able Professor of Chemistry in the Lehigh University at South Bethlehem, Pa., was a serious loss to the scientific world. A thorough chemist, with whole-souled devotion to his profession, he would doubtless have risen to still greater distinction, with the more extended opportunities that were in store for him.

The month of *April* is memorable for the loss of the great Austrian clinical teacher, Professor JOHN OPPOLZER. When Skoda retired from the Vienna School, he left a blank that was not easily filled; but it must have been a heavy blow to the cause of science and to the interests of that important institution when his colleague was removed by the hand of death from his sphere of extraordinary usefulness. Prof. Oppolzer had been successively Clinical Professor at Prague, Leipsic, and Vienna, in which last city he had for fifteen years been distinguished as a practitioner and a teacher, being no less remarkable for his great powers of diagnosis than for his therapeutic accuracy and skill. It has been said, in illustration of his earnest and thorough devotion to his profession, that he scarcely ever failed to be present at a post-mortem examination of a patient under his charge during thirty years of continuous hospital labor. His loss was a calamity to the medical world. The death of Dr. DAVID H. TUCKER, Professor of the Practice of Medicine in the Medical College of

Virginia, and formerly Professor of Midwifery in the Franklin Medical College of Philadelphia, must also at this time be recorded.

FRANÇOIS ACHILLE LONGET, aged 68, the eminent physiologist, died at Bordeaux in *May*, it is said "broken-hearted at finding the city where he had spent the greater part of his laborious and useful life abandoned to the tender mercies of the Revolution." Nearly a third of a century since, with the distinguished Matteucci, he made valuable researches on the irritability of the nervous system. In 1843-46 he published his celebrated "*Traité d'Anatomie et de Physiologie du Système nerveux de l'Homme et des Animaux vertèbres.*" In the ensuing year he gave to the world equally interesting papers on physiology, especially on the nervous system. From 1850 to 1855 he was occupied with the publication of his excellent "*Traité complet de Physiologie.*" This was his last large work, although he continued until a much more recent date to contribute valuable material to all the leading scientific and medical periodicals of the day. The distinguished octogenarian electrician, ANTOINE CÉSAR BECQUEREL, also died about the same time. His great work on Electricity and Magnetism, in seven large octavo volumes, was published about a third of a century ago. He was a remarkably prolific writer, contributing an immense amount of scientific matter to the literature of the times and to the transactions of learned societies. Among his best works we may particularly specify his treatise on "*Physics in its Relation to Chemistry.*"

LIONEL JOHN BEALE, who died in *June*, aged 75, possessed strong literary tastes and wrote numerous useful treatises, including investigations on "*Spinal Diseases,*" "*Laws of Health,*" "*Health and Longevity,*" "*Personal and Domestic Hygiene,*" etc. His abilities shone in the refined walks of the arts, in philology, ethnology, etc., rather than in the more arduous labors of professional life, and his views were liberal and denotive of culture and good taste. He was the father of a no less worthy son, Dr. Lionel S. Beale, whose own literary and scientific achievements have given him deserved prominence.

Dr. THOMAS HAWKES TANNER, who died at Brighton, England, in *July*, at the early age of 46, was well known in this country, not only as a frequent contributor to medical journals, but also as the author of a "*Manual of the Practice of Medicine,*" which passed through several editions, an "*Index of Diseases,*" "*Diseases of Infancy and Childhood,*" "*Signs and Diseases of Pregnancy,*" and other useful and practical works. Professor GEORGE C. BLACKMAN, of Cincinnati, who died at the age of 52, was one of the most distinguished of our Western surgeons, being not only an operator of boldness, experience, and skill, but also a brilliant clinical teacher and lecturer.

In the month of *August* died, at the early age of 47, Dr. HYDE SALTER, of London, whose name is universally familiar to the profession in connection with the best treatise on asthma that has appeared in any language. Himself a martyr to it through a long series

of years, he was able vividly to portray his own sufferings in the accurate pictures he drew of the morbid condition upon which they depended. In 1851 his excellent notes of Dr. Todd's clinical lectures were embodied in the latter's well-known work on Clinical Medicine. He was editorially interested in the "*Encyclopædia of Anatomy and Physiology,*" the articles "*Pancreas*" and "*Tongue*" being written by him and beautifully illustrated by his facile pencil; and his valuable assistance was called into requisition in connection with Todd and Bowman's *Physiology*. He was also an excellent clinical teacher, and many of his lectures and essays gave additional force and value to the medical periodical literature of the day; but his work on Asthma will be a permanent monument of his literary culture and professional skill.

In *September*, another of the extensive series of authors and practitioners whose ranks during the year were so fatally invaded was lost to science. SAMUEL SOLLY, aged 66, a prominent surgeon, though hardly ranked as worthy to occupy a foremost place in the brilliant galaxy of illustrious British hospital surgeons, was better known in this country as the author of a work "*On the Human Brain, its Structure, Physiology, and Diseases,*" which was republished here, although his "*Surgical Experiences*" and "*Analysis of Müller on the Glands*" are not unfamiliar to medical readers. Prof. ROBERT BENTLEY, very prominent as an author and lecturer on botany, and for his scientific and literary attainments, died at London, at the age of 50. He was Professor of Botany or *Materia Medica*, or lecturer on both combined, in King's College, to the Pharmaceutical Association of Great Britain, and to the medical colleges attached to several of the London hospitals, President of the British Pharmaceutical Congress in 1865 and 1866, one of the editors of and a constant contributor to the *Pharmaceutical Journal*, the author of a "*Manual of Botany,*" and, in conjunction with two other members of the profession, edited Pereira's *Manual of Materia Medica and Therapeutics*, after the lamented death of its distinguished author. Dr. JOHN EDWARDS HOLBROOK, for many years Professor of Anatomy in the Medical College of South Carolina, died at Norfolk, Massachusetts, aged 76. Natural history was his favorite study, and in its charming walks he not only created a genuine enjoyment and reputation for himself, but he also contributed to literature his excellent work on "*Reptiles,*" published in Philadelphia about thirty years since.

The profession in England lost in *October* two of its members, who, though not in the latter years of their lives prominently brought to the surface of popular notice, once contributed valuable materials to medical literature. Dr. RICHARD T. EVANSON, aged 72, in conjunction with Dr. Maunsell, wrote, a third of a century ago, the first really excellent treatise up to that date issued "*On the Management and Diseases of Children.*" LANGSTON PARKER, 66 years of age, was the author of works on "*Comparative Anatomy,*" "*Diseases of the Stomach,*" and "*Cancer;*" but his best

work is that on "Syphilitic Diseases," which passed through several editions. American editions of the latter, and also of that of the two associate authors just referred to, appeared at the time, that of Parker in the "Library" department of Prof. Dunglison's "American Medical Library and Intelligencer."

The necrological record of the year would be incomplete without an allusion to the losses sustained during the year just past by the profession at home in our own city. Death has not invaded the ranks of the writers and teachers of medicine, but has stricken down several useful and valuable lives among those who had devoted themselves to its arduous practice. Without any attempt to make the list complete, we may mention, in addition to those already referred to, the names of Drs. EDWIN SCHOLFIELD, JAMES M. GREENE (U.S.N.), MORRIS C. SHALLCROSS, JOHN GEGAN, J. BURTON MUSTIN, CHAS. R. PARVIN, ELIAB WARD, and CHARLES NEFF. To this list may be added the name of Dr. N. D. BENEDICT, formerly Superintending Physician of the Philadelphia Almshouse, and afterwards of the New York State Lunatic Asylum, who had resided in the South for a score of years. He was the author of a "Compendium of the Practice of Dr. Nathaniel Chapman."

R. J. D.

THE BURN BRAE.

WERE we asked to adduce one of the strongest proofs of advancing civilization on the side of enlightened humanity in the present age, we would point to the improvement in the treatment of the insane. Not to speak of what has been accomplished in this way in Europe, our own country can boast of noble institutions for the benefit of the increasing number of those unfortunate persons who are bereft of their reason,—smitten with madness. Much, however, yet remains to be done to meet the requirements for the proper care-taking of the insane poor, who are still too much neglected, or suffer from maltreatment. Private asylums for the insane have long been in existence, but they have not escaped harsh censures for abuses in their management, which have been made the subject of a sensational novel by a popular English writer of the day. It gives us, therefore, the more pleasure to speak of Burn Brae, a "Private Hospital for Mental Diseases," in the neighborhood of Philadelphia, which may well be regarded as among the highest of its class. The corporate institutions of our city, the Pennsylvania Hospital for the Insane, and the Friends' Asylum for Persons Deprived of the Use of their Reason, are well and advantageously known through their annual reports; and it has been left to the Burn Brae, formerly named Clifton Hall, without extraneous aid, to gain for itself a reputation by its being thrown open to the inspection of all interested inquirers, and especially of a number of medical gentlemen, who expressed their entire satisfaction of the adaptedness of the establishment to the object proposed.

The separation of the insane from their families, and their removal from their homes, which are indispensable measures for their recovery, should have as many compensating circumstances as possible in the establishments to which they are to be taken. Seclusion without obvious restraint, quiet without dulness, variety of objects and fitting company without undue excitement, ought to be secured for them in their new homes. These ends can be best reached in a retreat for the insane, the superintendent of which charges himself with only a small and limited number of patients, who will constitute a family, with the several members of which his intercourse will be friendly and confidential. He is always at hand to note every change in their mental disorders and infirmities, and to shape his treatment accordingly. He enjoys another advantage of great importance in his having continually under his eye the personal attendants on the insane and being able to keep them to the faithful and vigilant discharge of their duty. It may be stated on this occasion that just now the tendency of medical opinion, of which the late Sir James Simpson was a conspicuous representative, inclines to the erection of small hospitals of every kind,—cottage hospitals, as they are called in England.

The Burn Brae is situated within a few miles of Philadelphia,* in a district of country remarkable for the purity of its air and the varied prospects presented by its undulations of hill and valley and interspersed woods. The house was erected under the direction of Dr. Robert A. Given, its medical superintendent and proprietor. It is so constructed as to give pleasant quarters for forty patients, each of them having his or her own room, well aired and lighted and opening on corridors with similar advantages. An intelligent lady, as matron, devotes her time exclusively to the care-taking of the lady patients. On the gentlemen's side, Dr. Given has an able assistant, ready for any emergency.

Were a stranger, not knowing beforehand the nature of the establishment, to visit the Burn Brae and be shown through it and traverse its corridors and look in on the neatly-furnished parlors and chambers, he would believe himself to be in a boarding-house of the first class, and wish that he and his family could procure for themselves such accommodations as those now before him. Nor would the illusion be dispelled were he to be invited to a seat at the dinner-table, at the head of which the hospitable superintendent always presides, and on both sides of which are the inmates of the house who are able to leave their rooms. The more infirm, and those who may happen to be too excited to take their place at the table, are served at the same time and with the same abundance as the others,—the daily supply consisting of some one of the best meats, or poultry, or fish, and fresh vegetables from the garden. The dessert consists, for the most part, of the best fruits of the season. We are the more minute in speaking of

*The house is a little in retreat from the old Baltimore turnpike, in front of and a very short distance from Oak Lane Station, on the Media and West Chester Railroad. The post-office is at Kellyville, Delaware County.

the fare in this house, as so much depends on abundant and wholesome nutriment, varied from day to day, for the successful treatment of chronic diseases.

From whatever side of the home one looks out, the eye is greeted with Nature's livery,—the never-tiring green, of every hue. The diversified features of the grounds—the lawn in front, with its old trees, shrubbery, flowers, and fountains, sloping down to a miniature lake, and a thick grove beyond—invite to health-restoring walks. The view from the window in the rear of the house extends over meadow, field, and strips of woods to the not distant Delaware and the blue hills of Jersey beyond. In this retreat, thus favored by nature and improved by art, not only the admittedly insane, but also they whose minds, by overmuch toil and overwrought feelings, have become jaded and worn, may find rest and recreation, and recover their lost energies and buoyant hopes.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY, NOVEMBER 23, 1871.

THE PRESIDENT, DR. J. H. HUTCHINSON, in the chair.

DR. W. G. PORTER presented a specimen of *aneurism of the aorta following popliteal aneurism*, removed from W. M., black, fifty-three years of age, and for several years past a porter at the Masonic Hall. He had always enjoyed good health until about three years and a half ago, when he noticed a pulsating tumor on the left leg, in the region of the popliteal artery. The tumor increasing in size incapacitated him for work, and in the autumn of 1868 he sought the advice of Prof. Gross, who pronounced the tumor an aneurism, and advised the ligation of the femoral artery. The operation was accordingly performed, and he made a good recovery, and afterwards enjoyed good health, being able to attend to his work until about six months ago, when he began to suffer from dyspnoea on exertion, and noticed that his feet were swelling. He was treated by several physicians without relief, and finally, about the middle of October last, he became a patient of the Philadelphia Dispensary. On visiting him, Dr. Porter found him lying in bed on his left side, and suffering considerably with shortness of breath, which was increased when he attempted to lie on his right side or on his back. The respiration was stridulous. There was no difficulty in swallowing, and occasionally he had a hacking cough. Both lower extremities were very much swelled, and pitted freely on pressure. There was some fluid in the abdominal cavity. The left side of the chest was much more prominent than the right, and the left side of the face was more cedematous than the right. The conjunctiva of the left eye was considerably congested and injected. The pupils were equal and natural. No arterial pulsation could be detected on the left side of the body in either the carotid, facial, temporal, axillary, brachial, radial, or ulnar arteries. There was no evidence on auscultation of a tumor about the neck or front of chest; the examination, however, could not be very thorough, on account of the condition of the patient. No thrill or murmur could be detected. The urine was scanty and contained albumen. The patient suffered extremely on account of the dyspnoea, which increased in spite of everything that was done for him; and, growing weaker and weaker, he finally died, exhausted, on the 17th of the present month.

The post-mortem examination was made about forty-eight hours after death. On opening the chest, the left side was found almost completely filled with fluid, the lung being forced away from the chest-wall, except at two or three points

where it was adherent, forming teat-like projections, which could still be seen. There was a small amount of fluid in the right side of the chest. The heart was enlarged, but its valves were healthy. The aorta was enlarged and extensively atheromatous. About the junction of the arch with the thoracic aorta an immense aneurism had formed, which was almost completely filled by a hard, firm clot, and which, extending laterally and backwards, had eroded the bodies of the second, third, and fourth dorsal vertebrae, and had removed the pericostum of the corresponding ribs. The left subclavian and carotid arteries were entirely occluded; the other branches of the arch were enlarged. The kidneys were granular and contracted.

The popliteal aneurism and part of the artery above and below were removed, and present the following appearances: The aneurism is entirely obliterated. The artery below the seat of aneurism is a fibrous cord; above it is patulous.

BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES.

MONDAY, DECEMBER 4, 1871.

W. S. W. RUSCHENBERGER, M.D., in the chair.

DR. JAMES TYSON called for the final reading of his resolution to amend the Regulations, as follows: "Resolved, that Article XVII. of the Regulations of this Section be amended so as to read, 'The stated meetings of the Section shall be held on the first Monday in each month, except July and August, at such an hour as may be fixed by the Section.'"

In explanation of this proposed change from semi-monthly to monthly meetings, Dr. Tyson remarked that the number of actual working-members had during the past year become so small, and they were, during the winter months, so occupied with various professional engagements, that it seemed impossible to secure from them contributions for each of twenty meetings yearly. He was certain that sufficient devotion to microscopical science still remained among us to supply interesting material for the reduced number of ten meetings per annum.

After discussion by Drs. Hunt, McQuillen, Tyson, and others, the resolution was unanimously adopted.

It was agreed that the Recorder be directed to announce upon the notices of the meetings the title of the paper to be read at the ensuing meeting, with the name of the author.

The election of officers for the year 1872 was then proceeded with, and resulted in the choice of the following gentlemen:

Director—W. S. W. Ruschenberger, M.D.

Vice-Director—James Tyson, M.D.

Recorder—Joseph G. Richardson, M.D.

Corresponding Secretary—J. H. McQuillen, M.D.

Treasurer—Isaac Norris, M.D.

Conservator—William H. Trueman, D.D.S.

At an informal conference of the members subsequent to adjournment, Dr. J. G. Richardson was appointed to present a paper for discussion at the meeting to be held on Monday, January 8, 1872, and proposed to offer some remarks upon "Certain Parasitic Fungi and their Relations to Disease."

REVIEWS AND BOOK NOTICES.

A TREATISE ON LOCALIZED ELECTRICITY AND ITS APPLICATION TO PATHOLOGY AND THERAPEUTICS. By Dr. G. B. DUCHENNE. Translated from the Third Edition of the Original by HERBERT TIBBITS, M.D., Licentiate of the Royal College of Physicians, London; Medical Superintendent of the National Hospital for the Paralyzed and Epileptic. With numerous Illustrations, and Notes and Additions by the Translator. 8vo, pp. 322. Philadelphia, Lindsay & Blakiston, 1871.

Of late years a considerable number of books on medical electricity have been published, among the most prominent of

which in the English language are the works of Althaus, Moritz Meyer (translated by Hammond), and Morgan, besides numerous others in German and French. The difficulty with most of these is that they are too exclusively scientific, and give the practical points too little attention, to be of much value to most general practitioners, of whom the majority find it necessary at times to make use of electricity for medicinal purposes, and consequently require some text-book for reference.

This volume of M. Duchenne, however, which is in its third edition,—the first having been published in 1855 and the second in 1861,—is eminently practical, and is written in so clear and distinct a style that it will be available for even persons with but little previous knowledge of electricity. Moreover, the reasonable price for which it can be obtained will induce many who are not specially interested in the subject to purchase it.

The translator, Dr. Tibbits, is well fitted for the work, from the large experience he must have had in electro-therapeutics through his connection with the National Hospital for the paralyzed and epileptic in London. He has appended many notes which are of considerable value.

It is scarcely necessary to refer to M. Duchenne's reputation in connection with his subject, for it is well known that he was one of the pioneers in the therapeutic use of induced currents, and was the inventor of localized faradization, or, in other words, discovered that electricity could be confined to the skin or any separate muscle at the will of the operator.

The first chapter of this work gives a description and explanation of the three forms of electricity employed in medicine, and discusses their relative merits; and we may here observe that in the second edition the author made no mention of galvanism as a therapeutic agent, notwithstanding all that Remak had shown it to be capable of effecting, but in this edition he is compelled to recognize its value in many conditions.

It must cause all scientific men regret to witness the tone of the dispute between Duchenne and Remak, both of whom have contributed so largely to science. In their discussions both lost their temper, and so prejudiced were they that neither could profit by the researches of the other. It is particularly unfortunate that in this edition, written since the death of Remak, the author loses no opportunity of disputing the assertions of his opponent in regard to the constant current, and in a most undignified manner. He gives preference, however, to faradization, because it can be applied for any length of time without giving rise to any lesions of the skin where the poles are applied, except perhaps in some cases to a trifling erythema; whereas the constant current, when the electrodes are in contact with the skin for any considerable period, becomes exceedingly painful, and may cause vesication, or even deep eschars. Besides, on account of its power to excite the retina, galvanism may produce the most grave consequences, and the author relates a case, on page 16, in which, while using a galvanic battery, which was then new to him, he totally destroyed the sight of an eye.

Of the induced currents he treats at some length, and points out the purposes to which the primary and secondary currents are best adapted.

In the second chapter there is given a description of batteries for medical uses. M. Duchenne prefers, for obtaining the constant current, "Marie-Davy's sulphate of lead battery," as being more constant and less expensive than most others, besides not having the disadvantage, like Bunsen's battery, of the escape of fumes of nitrous acid. For the induced current, his own "volta-faradaic" apparatus is considered the best. A thorough and practical account is given of the method of applying local electricity, including a description of electrodes for different organs. The author's views differ somewhat from those of other writers on the subject,—Remak and Ziemssen, for instance, who recommend that the muscles should be electrized through their motor points. Duchenne states "that, in order to faradize a muscle completely, it is necessary that the moist rheophores should cover the whole of its surface; and when they are not large enough to do this, they should be applied in succession to all the points of the surface." Muscles that are deep-seated and cannot be reached by this means he recommends to be stimulated by indirect faradiza-

tion or through their motor nerves. He also uses the motor points when it is desired to produce contraction of a muscle *en masse*.

In Chapter III. the author gives some "historical and critical observations upon the principal methods of electrization," giving quite a full account of the action of the constant current; but he still disagrees on many points with Remak. In this connection he treats of trophic nerves, and states his firm conviction of their existence. He also refers to the resorbent or catalytic action of galvanism in "chronic articular affections with nodosities," ganglionic tumors, etc., having obtained cures in such cases by this agent.

Chapter IV. is devoted to a description of electro-medical instruments and their application, with an historical account of induction apparatuses from Faraday's instrument, which was "the first magneto-electric machine," to the latest induction battery.

Dr. Tibbits in a note describes Stöhrer's admirable galvanic battery, and also a portable induction apparatus by the same maker, which he considers the best for the "ordinary exigencies of practice," while he regards Duchenne's large volta-faradaic battery as the most perfect for medical purposes. These batteries are both vastly superior to the induction apparatuses generally in use, which have only a weak primary current, and no means of making the intermissions slow. Moreover, in most of the batteries there is no arrangement for reducing the strength of the current to the minimum. Duchenne makes use of his "water moderator" for this purpose; and any one familiar with faradization must have experienced the advantages of using some such contrivance.

THE EYE IN HEALTH AND DISEASE. By B. JOY JEFFRIES, A.M., M.D. 8vo, pp. 112. Alexander Moore, Boston, 1871.

Since Arlt, in 1846, published his brochure on the "Care of the Eyes," in the hope that by so doing "many would better protect their eyes from harm, many be saved much groundless solicitude and anxiety from trivial accidents to the eye, if they were better acquainted with the structure and functions of that organ," the public has been favored with several other works of like purport. Unfortunately for itself, however, that fickle auditory has bestowed but little attention on their contents, and the amount of ignorance in the community, even among well-educated people, as regards the functions, capacities, and care of their eyes, is at once astonishing and lamentable. We therefore welcome this book of Dr. Jeffries, and cordially recommend it both to the laity and to those of our profession who lack the time or inclination to make themselves acquainted with the more comprehensive works on the subject. We believe, however, that the author would have better fulfilled his aim and made a more interesting book if he had written less on pterygium, iritis, etc., and on the operations on the eye, and more nearly restricted himself to an explanation of the optical defects of the eye and to the amount of disease of that organ caused by insufficient lighting in our schools and by improper positions of the head and book,—often almost forced on the pupil by an injudicious construction of the chairs, benches, desks, etc. In a word, we regret that he has not devoted more space to those hygienic measures calculated to prevent disease of the eye and to preserve that important organ in good condition throughout life; for we cordially agree with the old German proverb which (in English dress) he has chosen for the motto of his book, that "a blind man is a poor man."

SUDDEN DEATH SOON AFTER PARTURITION. By THOMAS MOORE MADDEN, M.D.

This accident is rarely met with, but, when it happens, brings terror to all who witness it. The subject, though of great interest, has never been treated *in extenso*, and we commend this essay to all attendants on lying-in hospitals. The remarks of Dr. M. were called forth by five cases which occurred in his practice at Rotunda Hospital in Dublin. There are many causes of sudden death *during* labor, of which the most familiar are organic disease of thoracic viscera, rupture of the uterus or bladder, bursting of an aneurism or abscess, sudden removal of pressure, causing great congestion of the viscera, hemorrhage, syncope, and shock, which Cazeaux says sometimes occurs a few days even after labor.

After labor it may occur from embolism, syncope, shock, anæmia, or entrance of air into the uterine sinuses. Dr. Meigs pointed out the frequency of embolism in these cases as long ago as 1849.

Our author thinks it necessary to explain the difference between thrombosis and embolism.

He gives us full histories of his cases, in three of which no post-mortem could be obtained. His first case was one of inertia, requiring chloroform and the forceps. Peritonitis set in on the fourth day, and gangrene of the cervix and vagina, with the peritonitis, was found after death. The second case had a deformed pelvis, and premature labor (eight months) was brought on by the douche and forceps. Depression followed next day, resulting in death. No autopsy was made, but, from ecchymosis on the surface, Dr. M. thinks death was the result of entrance of air into the uterine sinuses. Death was sudden in this case. The third patient was still suffering from diphtheria when labor set in. Depression quickly followed, and she died the same evening, death being attributed to embolism. The fourth was a primipara, on whom chloroform and forceps were used after she had been in labor twenty-five hours. Although no bad symptoms followed, she was found dead in her bed next morning. The probable cause was syncope. The fifth was a primipara who had an easy labor, followed by adherent placenta, which was successfully removed. Collapse soon occurred, followed by death the same evening. The post-mortem showed rupture of varicose veins of the left ovary.

In three of these cases the forceps were used, and in one of these three both the douche and forceps. In the third, we think an attack of diphtheria, with labor in addition, is sufficient to account for the fatal depression. In all but one, operative proceedings were necessary to complete labor. We think the use of instruments in labor makes a profound impression on most patients, no matter how much confidence they have in their attendants; and all such cases should be watched for some time after labor.

We hope the remarks of Dr. M. will attract the attention of all obstetricians, and call forth their experience in this neglected field of investigation.

ESSENTIALS OF THE PRINCIPLES AND PRACTICE OF MEDICINE. A Handbook for Students and Practitioners. By HENRY HARTSHORNE, A.M., M.D., etc. Third Edition, thoroughly revised. 12mo, pp. 487. Philadelphia, H. C. Lea, 1871.

This work is so well known to the profession that an extended notice of it would be needless at the present time. The author has made numerous additions and alterations, in such a manner, however, as not to increase the size of the volume,—a circumstance which no doubt is thought to add to its value as a text-book. The new articles occur in the discussion of tuberculosis, relapsing fever, and the therapeutic uses of carbolic acid and the hydrate of chloral, and are generally exhaustive treatises of what is known upon the subject. In relapsing fever, however, no mention is made of the silvery-white tongue or of the peculiar thermometric indications as aids to diagnosis. By a strange oversight, he also says (p. 134), "Hydrate of chloral has not so far been found safely available for hypodermic medication," having evidently not seen the article by Da Costa in the *American Journal of the Medical Sciences* for April, 1870.

But perhaps the best test of the value of the book is to be found in the author's views concerning inflammation and the germ-theory of disease. Prof. Hartshorne, it would seem, is disposed to lay great stress upon increased arterial pressure in inflammation, and to disregard the late researches of Legros and Onimus in relation to the peristaltic action of the capillaries themselves being the most important agent in such cases. It is true that ligation of the main artery of an inflamed limb will control inflammatory processes, but so also will cold and pressure locally applied, as in Mr. Paget's treatment of carbuncle; and the two methods surely do not act in the same manner.

In the article upon zymosis we were surprised at not finding any mention of the experiments of Prof. Tyndall, Pasteur, Frankland, etc. in regard to the germ-theory of disease, or of the important refutation of Hallier's fungus-cultivation at the

hands of Dr. Billings, of Washington. There are several other points in this volume which need revision, such as the confounding of cholera morbus with the Asiatic type in certain local American epidemics, and the assertion that yellow fever ever occurs endemically outside of the Gulf of Mexico. The chapter on blood-letting might be improved by referring to Dr. B. W. Richardson's lectures on that subject, and more stress might be laid upon the differential diagnosis between pneumonic and tubercular phthisis; but the work as a whole is well written and worthy of the reputation of its author.

THE FUNCTIONS AND DISORDERS OF THE REPRODUCTIVE ORGANS IN CHILDHOOD, YOUTH, ADULT AGE, AND ADVANCED LIFE, CONSIDERED IN THEIR PHYSIOLOGICAL, SOCIAL, AND MORAL RELATIONS. By WILLIAM ACTON, M.R.C.S., Fellow of the Royal Med. and Chir. Society, etc. Third American from the fifth London Edition. 8vo, pp. 348. Philadelphia, Lindsay & Blakiston, 1871.

The public appreciation of this work, as shown by the number of editions that have been called for, is a better criterion of its practical value than anything that can issue from the reviewer's pen. This edition has been thoroughly revised, and materials that have accumulated since the previous ones were published have been incorporated.

The work is a very valuable one, and its teachings should be the mental possession of every one who attempts to train up boys and to fit them for their duties as men. It is, on this account, no less valuable to the teacher and pastor than it is to the physician; in fact, its teachings are more valuable to the former than to the latter, for the evils here considered are best treated by prophylaxis. Both mental and physical evils have resulted before the physician has been consulted, and too frequently these results are permanent, or can at best be palliated, not really cured.

The book is free from all cant; and yet moral and religious stand-points are not neglected in the slightest degree in the consideration of the sins of youth and manhood and their consequences. In the articles on masturbation in childhood and youth, the causes and consequences are well considered; no undue importance is given to this vice, but its great dangers are pointed out, and in the consideration of its causes he suggests the proper line of treatment for the various classes of cases.

Dr. Acton lays great stress upon the value of "continence," which he defines as "voluntary and entire forbearance from indulging in sexual excitement or indulgences in any form." In another place he writes, "True continence is complete control over the passions, exercised by one who has felt their power, and who, were it not for his steady will, not only could, but would, indulge them." This continence must be entire, "mental" as well as physical. He asserts that the result of such habits will be the production of an almost wonderful degree of vigor of both body and mind; and he entirely disproves the old idea of the possible loss of virility as the result of non-use of the organ vested with the execution of that power. The occasional seminal emissions consequent on continence are a proof of vigor rather than of weakness. The difficulty of maintaining the condition of continence is not underrated, and yet it is proved to be no impossible task nor even a heavy burden. The point upon which stress is laid is a proper commencement. Of the correctness of the popular idea of reform after the "wild oats are sown" he expresses great mistrust,—in fact, almost entire disbelief.

Nor does Dr. Acton spare the married men. He very justly can see no difference, either in operation or result, between the masturbator and him who, to satisfy his worse than beastly lust, sacrifices his wife and his health to an imaginary need which has its origin only in his own vitiated thoughts and practices. The terrors of impotence, nocturnal and diurnal emissions, and spermatorrhœa are lucidly explained away: these conditions or accidents are placed upon their proper basis, their causes ascertained, and the method of cure pointed out.

GANGLION OF THE WRIST SUCCESSFULLY TREATED BY ELECTROLYSIS.—In this case (*British Medical Journal*, November 4), needles connected with the negative pole were introduced into the tumor.

BOOKS AND PAMPHLETS RECEIVED.

Lectures on the Clinical Uses of Electricity. Delivered in University College Hospital. By J. Russell Reynolds, M.D., F.R.S., Professor of the Principles and Practice of Medicine in University College, etc. 12mo, pp. 112. Philadelphia, Lindsay & Blakiston, 1872.

Neuralgia, and the Diseases that resemble it. By Francis W. Anstie, M.D., Lond., Lecturer on Medicine in Westminster Hospital School, etc. 8vo, pp. 302. New York, D. Appleton & Co., 1872. For sale by J. B. Lippincott & Co., Philadelphia.

On the Treatment of Pulmonary Consumption by Hygiene, Climate, and Medicine, in its Connection with Modern Doctrines. By J. Henry Bennet, M.D., Member of the Royal College of Physicians, etc. Second Edition. 8vo, pp. 190. New York, D. Appleton & Co., 1872. For sale by J. B. Lippincott & Co., Philadelphia.

On Chronic Hypertrophy of the Lips. By R. W. Taylor, M.D., Surgeon to the New York Dispensary. Reprinted from the *Medical World*, November, 1871.

Annual Report of the Surgeon-General of the United States Army, 1871.

GLEANINGS FROM OUR EXCHANGES.

THE CÆSAREAN OPERATION IN THE UNITED STATES. By Robert P. Harris, M.D.—This is the title of an historical monograph of some thirty pages in length, which has just appeared in the *American Journal of Obstetrics*, as a portion of the proceedings of the Philadelphia Obstetrical Society; to be followed in the February number of the said journal by an abstract of cases, published and unpublished, which have been, many of them, rescued from obscurity after a tedious research in public and private libraries, and by an extensive correspondence embracing every State in the Union. The subject of the paper is one of considerable interest, both to the surgeon and the obstetrician, and was undertaken by Dr. Harris for two reasons: 1st. To show the success of the Cæsarean operation in our country; and 2d, the importance of resorting to the use of the knife early, if it is to be employed with a reasonable hope of success.

Up to the present writing, we are informed by Dr. Harris that he has collected sixty cases of the operation; which resulted in saving the lives of thirty-two women and twenty-seven children, the last operation dating Nov. 23, 1871. Of the sixty operations only seventeen were performed with a reasonable degree of promptness, calculated either by hours, or based upon the condition of the patient, the latest being twenty-four hours after the commencement of labor. These resulted in the saving of twelve women, 70 $\frac{1}{7}$ per cent., and fourteen children, 82 $\frac{6}{7}$ per cent. All the children were alive when delivered, save one, which was born of a sickly woman, having a fibrous tumor and affected with intermittent fever. Two died soon after delivery, one being deformed in the lower extremities, and both very feeble. Of the five women who died, two fell victims to peritonitis (one having been operated upon twice before); one to obstruction of the bowels; one to secondary shock; and one to "irritative fever," at the end of three weeks.

These results establish very conclusively the value of operating early, and before the woman has been injured by craniotomy or exhausted by other fruitless efforts at delivery. In contrast with this degree of success it may be well to state that there were eighty-eight Cæsarean operations performed in Great Britain and Ireland from January, 1738, to March, 1866, before twelve women were saved. Dr. Harris has collected one hundred and six cases for Great Britain and Ireland, showing a saving of sixty children and but eighteen women. From 1822 to 1852 inclusive, twenty-six operations are recorded as performed in the United States, resulting in the saving of eighteen women and nine children. Ten of the twenty-seven women were operated upon on the first day of labor, resulting in saving eight, with seven of the children. English statistics

point to a more favorable result than American as regards the children, but to a much less favorable result as regards the women. This is ascribable in part to delay in most cases, but is no doubt also in great measure owing to the large proportion of subjects whose pelvic deformity arises from the existence of malacosteon, not a single case of which is recorded in the table for the United States, the deformities (33) being all due to rachitis in childhood. It is also probable that a cold damp climate is unfavorable to success. One-third of our operations have been performed in the States of Louisiana (8), Alabama (7), and Mississippi (5), resulting in saving twelve, or sixty per cent., of the women, and ten children. One woman, in Mississippi, was operated upon three times, and died of peritonitis on the third occasion, although there was no delay in making the section. The first and second operations took place in warm weather, and cold lotions were applied to the abdomen; the last was in October,—a much less favorable season of the year in that locality.

From the investigations of Sir Charles Bell, and more recently of Spencer Wells, and others, into the condition of the uterine wound after the completion of the operation, it has become a question of some moment to decide whether or not it is advisable to close this incision by sutures; and this matter has assumed a definite experimental character on both sides of the Atlantic during the last four years. Of nine examples collected from British tables, eight belong to this period, and of seven in Dr. Harris's table, six are in the same category. Two cases in each list had a favorable termination, silver sutures being employed in two; linen thread in one; and the long-tailed removable uninterrupted silk suture in the other. Two American women, recently reported in good health, who it is not at all probable could have been saved but for this expedient, have carried, without any perceptible inconvenience, the one six silver sutures, and the other five thread ones, for the last four years. The results of ovariectomy have demonstrated that traumatic peritonitis is not so much to be dreaded as the same inflammation from other causes; and those of the Cæsarean operation have shown that hemorrhage, exhaustion, and the escape of the lochia into the peritoneal cavity are more to be feared than the injury to the peritoneum by the knife, especially when the last is not favored by exhaustive delay in resorting to it.

The value and safety of the uterine suture have yet to be shown, as it is impossible from the few cases in which it has been employed to say what may be anticipated from its use. It is certain that some cases might be saved by it that could not be without it, but it is equally certain that its influence as a cause of peritonitis has not been as yet estimated: it is probable that this may be more than balanced by the salutary effects of checking hemorrhage and preventing the entrance of uterine discharges into the abdominal cavity. What would be the effect of pregnancy upon imbedded sutures in the uterine walls has still to be shown, as we are not aware that any such test has yet been made. To obviate the possibility of risk in this event, various forms of removable suture have been proposed, but the difficulty of using them, as compared with the interrupted suture cut close, has prevented a full trial of their merits.

FISSION OF RED BLOOD-CORPUSCLES.—Dr. Laschkewitsch, of Charkow, places on record (*Lancet*, Oct. 28; from Stricker's *Medizinische Jahrbücher*, Heft iii.) a case of Addison's disease in which he obtained the remarkable phenomenon of fission of red blood-corpuscles. The patient was forty-five years of age, very anæmic, and suffered for about a year from considerable debility, with headache, palpitation of the heart, and dyspnoea. The size of the spleen, as ascertained by percussion, was somewhat increased. On examining the blood-corpuscles under the microscope, they appeared paler and larger than usual, and he observed that they changed their form whilst under examination. They presented biscuit, club, and vermiform shapes, thrust out one or more processes and again withdrew them, constrictions occurred, and ultimately portions separated off entirely. The addition of a little weak acetic acid considerably accelerated the rapidity with which these changes occurred. In the course of three months the bronzing of the skin of the face, neck, and hands became well marked.

EXCISION OF THE SCAPULA.—Mr. Charles Steele, F.R.C.S., reports in the *British Medical Journal*, October 14, the case of a boy (age not given) suffering from an encephaloid tumor involving the scapula, in whom this operation was performed. The disease seems to have been very rapid in its course; for, although the boy's mother said that it was of only six weeks' duration at the time it came under Mr. Steele's observation, the tumor occupied the whole surface of the scapula, with the exception of the inferior angle, and encroached slightly over the upper border towards the clavicle, being most elevated in the situation of the spine of the scapula. In appearance it was said to be very like a large cold abscess. The operation was commenced by making a free incision in the centre of the tumor down to the bone, when the characteristic appearance of encephaloid disease encysted in the muscles presented itself. Two elliptical incisions from the upper border to the inferior angle of the scapula were then made. The bone was disarticulated from the clavicle and also from the humerus, care being taken to cut the ligaments and tendons close to the latter bone, and the tumor was removed entire in its muscular capsule. The patient did well at first, but at the end of three weeks the disease had redeveloped itself in the ulcer left by the operation, and the boy finally sank under it.

THE ORIGIN AND DISTRIBUTION OF MICROZYMES (BACTERIA) IN WATER.—In the *Quarterly Journal of Microscopic Science* for October, 1871, there is published a most interesting memoir by Dr. Burdon-Sanderson upon this subject, and upon the circumstances which determine the existence of bacteria in the tissues and liquids of the living body. His conclusion, based upon a careful consideration of facts which presented themselves in the course of the experiments related in the paper, is that there is no developmental connection between microzymes and torula cells, and that their apparent association is one of mere juxtaposition. The grounds of this conclusion are stated thus:

1. The prompt appearance of torula cells in Pasteur's Solution whenever it is exposed to the air, and the rapid development and luxuriant fructification of the higher form (penicillium), show that, so far as the chemical composition of the liquid is concerned, there exist in it all the conditions favorable to the process.

2. Our experiments prove that when precautions are taken to prevent contamination by impure surfaces or liquids, the development which ends in penicillium goes on from first to last without the appearance of microzymes.

3. Whenever it is possible to impregnate the test-liquid with microzymes without at the same time introducing torula cells or germs, the development of the former begins and continues by itself without any transformation into the latter.

Thus, fungi are not developed without the access of air, notwithstanding the presence of microzymes in the same liquid in which, microzymes being absent, but air having access, they appear with the greatest readiness.

With regard to the spontaneous evolution of fungi, he says that the mode to determine the forms in which germs of fungi exist in the air, is that long ago proposed by M. Pouchet,—that of projecting a jet of air on a glass plate moistened with glycerine or syrup. A few experiments were made, but the results were mostly negative, for in London the particles of soot and refuse fragments thus collected are so numerous that organized particles, even if present, can scarcely be distinguished. Dr. B. found it a much more successful plan simply to expose a glass covered with glycerine to the air. On such a surface it was always possible to find a number of cells which resembled torula cells, and occasionally penicillium acrospores.

From this result he does not, however, conclude that it is by these forms that the cosmopolitan fungus (as Hallier calls it) is usually propagated; it frequently happens that liquids which have been once exposed, although they contain no visible cells whatever, rapidly germinate without further exposure. It is also certain that although air is the main source of what we may venture to call fungus-impregnation, as distinguished from impregnation with microzymes, yet the two acts may take place at the same moment, germs of torula being often contained in the same liquid media as germ-particles of microzymes. That this is so, is proved by instances

already referred to, in which liquids protected from air became filled with torula cells.

LIQUID FOR THE PRESERVATION OF WET ANATOMICAL PREPARATIONS.—Dr. B. Titcomb, in Transactions of American Medical Association (*Canadian Pharmaceutical Journal*; from *Chicago Medical Times*), suggests the following plan for keeping objects of pathological anatomy and material for dissection:

First place the object in a vessel containing pure water; let it remain a few hours, or over-night; then transfer it to another containing a solution of creasote,— $\frac{1}{2}$ ij to $\frac{1}{2}$ xij of water; let it remain over-night; then place it in a jar or vessel containing a liquid composed of the following:

Chloride of Sodium, $\frac{3}{4}$ iss;
Sulphate of Alumina, $\frac{3}{4}$ iss;
Nitrate of Potassa, $\frac{3}{4}$ vi;
Water, $\frac{1}{2}$ vii.

COXO-FEMORAL DISARTICULATION.—According to the *Medical Record* of October 2, the first regular coxo-femoral disarticulation was probably made by Kerr, of Northampton, England, in 1774, and was for hip-joint disease, or coxalgia, on a little consumptive girl, who lived to the eighteenth day after it.

MISCELLANY.

THE CHOLERA.—The number of deaths from this disease is diminishing in St. Petersburg, Königsberg, and Dantzic, but increasing in Constantinople and Elbing.

A YOUNG MOTHER.—Dr. Haining reports in the *British Medical Journal* for October 28 the case of a young girl who became a mother at the early age of twelve years.

The death of Mr. Samuel Solly, F.R.S., is announced. It is contemplated by his former pupils at St. Thomas' Hospital to erect a memorial to his memory.

STUDENTS AT THE PROVINCIAL MEDICAL SCHOOLS OF GREAT BRITAIN.—We recently (No. 29) published the number of medical students registered at the medical schools of London. From the *Medical Times and Gazette* for November 4, 1871, we extract the following with regard to the provincial schools:

	1871.	1870.
Manchester Royal School of Medicine and Surgery	111	98
Birmingham " " "	60	76
Liverpool Infirmary and School of Medicine and Anatomy	54	58
Leeds School of Medicine	45	46
Bristol Old Park Medical School	36	30
Cambridge University School	27	—
Newcastle-upon-Tyne College of Medicine	25	35
Sheffield Medical Institution	10	14

368 357

Though there is a slight increase in the total, there is a falling off at all of the schools except those of Manchester and Bristol. Including a slight addition to the new entrées at the London schools since the date of the report published in No. 29, there are now 1491 students pursuing their studies in London, and 1859 in the United Kingdom.

THERE are this year sixty-seven students in the Medico-Chirurgical School of Lisbon. Of these, nineteen are students of the first year, fifteen of the second, sixteen of the third, thirteen of the fourth, and four of the fifth year.

THE FATE OF INDIAN DOCTORS.—The practice of medicine among the Indian nations leads to as unpleasant consequences as those we recently referred to as having happened to a physician in Egypt. Indian Joe, a Piute medicine-man, well known among the whites, having failed to restore to health two sick Indians, was stoned to death by his tribe.

A LESSON FOR THE DAY.—The sympathetic influence of the outcries of labor upon pregnant women is well known. In lying-in hospitals it is not unusual for one noisy patient to bring down several others. Even old nurses, long past the climacteric, will hold their breath and bear down in sympathy with the expulsive pains. Stock-breeders have to guard against this tendency, for sometimes a whole herd will abort after one of their number has dropped her calf.

According to M. Sue (*Essais historiques sur l'Art des Accouch.*, vol. i. p. 599), a midwife, well advanced in pregnancy, while in attendance on a lady of Padua, was herself suddenly seized with the pains of labor. The housemaid, summoned from the basement,—not without many screams, we presume,—pluckily laid down her broom and made shift to deliver mistress and midwife. Unfortunately, she placed the infants—both of the same sex, as bad luck would have it—in the same cradle, where one of them was shortly afterwards found dead. As neither of the women could make out a clear title to the survivor, much wrangling and bad blood resulted.

A GERMAN PHYSICIAN'S DEFENCE.—A physician of Bromberg (*Wiener Medizinische Presse*, September 24, 1871) was fined five thalers for not following a police-regulation with regard to smallpox. He appealed, and demanded a judicial decision. This was permitted, and he asked his acquittal. He contended that he had not recognized the disease as smallpox, and demanded that the existence of the affection be proven. This proof was, naturally, not furnished, and his acquittal necessarily resulted.

DR. MOFFAT (*Food Journal*, vol. ii. 384) read before the British Association, in August last, a suggestive paper on "The Geological Systems and Endemic Diseases." He showed that goitre and other endemic complaints are very common among dwellers on the carboniferous system, while they are almost unknown on the Cheshire or the new red sandstone. Dr. Moffat found that wheat grown upon soil on the latter formation yields the largest quantity of ash, and that it contains a much greater quantity of phosphorous acid and oxide of iron than that grown upon other formations. The deductions drawn from these facts were that persons of anæmic or strumous habit should, if possible, be transferred from a carboniferous to a red sandstone soil, and should be dieted as far as practicable with food which contains the maximum quantity of oxide of iron and phosphates or nutritive salts.

THE PENNSYLVANIA HOSPITAL.—Our readers will be glad to learn that five hundred and fifty students are in attendance upon the lectures at the Pennsylvania Hospital, and that the majority of them are matriculates of the University of Pennsylvania and of the Jefferson Medical College. The hospital seems to have regained entirely its popularity with students.

FESTINALENTE.—The numerous friends of Dr. Marshall Hall will be pained to learn that he was forestalled in advising the operation of tracheotomy for epilepsy. Early in this century, the late very eccentric Dr. James Carson, of Liverpool, was once summoned in great haste to see a stranger at a hotel, who, at dinner, had floundered off his chair on to the

floor,—apparently choking, but really in a severe epileptic fit. Always acting with promptness, Dr. C. at once summoned the nearest surgeon, and had the unhappy windpipe slit open in a trice. Imagine the dismay of the doctor and of the surgeon when the patient, in a great rage, sprang upon his feet, "spluttering out, as well as his now impaired vocal organs enabled him, 'Who's cut my throat? Where's the man who cut my throat?'" We are not told how many guineas the surgeon got, nor what fee the off-hand doctor pocketed for this his first and last case of tracheotomy in epilepsy.

SIXTEEN Japanese students have matriculated this year in the University of Berlin. Most of them are attending the medical classes; some are students of jurisprudence and natural science.

THE LAWYER TURNING DOCTOR.—Lord Brougham, in his Autobiography, writing to Lord Grey, of whose family scarlet fever had taken hold, gives his advice, with all the freedom of a regular medical practitioner, in the following language, under date of September, 1813: "I know a good deal of that damnable disease, both from having had it myself twice, and from several of our family having had it in the worst possible shape. I have attended a good deal to the subject of cold affusion, and I beg of you to urge your medical men by all means to try it. They sometimes are afraid; but vaccination is not more demonstrably certain. Romilly's eldest daughter was saved by it. My sister I saw literally restored to life by it. She had been given over, and was thought to be actually gone, when the medical men ordered cold air to be let in upon her. This was long before the practice had become common. In Romilly's case it was by the more powerful application of cold water, applied again and again over the whole body, till it brought down the pulse and heat."

Lord Brougham makes no reference to Currie's work on "Water in Fever and other Diseases," the fifth edition of which was published in 1814. Of the various modes of treatment had recourse to in scarlet fever, that by the external use of cold and tepid affusion or immersion, and sponging the surface, has abundant experience in its favor.

Among others who have written on the subject, Dr. John Bell, in his volume on Baths, gives emphatic testimony in favor of this treatment.

PRIZE ESSAYS.—In accordance with the will of the late Dr. Lacaze (Boston *Med. and Surg. Jour.*, November 9, 1871; from New York *Medical Record*), a prize of ten thousand francs is to be awarded by the Faculty of Medicine of Paris every second year for the best work on phthisis and on typhoid fever, alternately. The first prize will be awarded at the end of the academical year 1871-72, for the best work on phthisis. Essays (with a distinguishing motto and the author's name in a sealed envelope) must be sent in before July 1, 1872. The prize is open to foreigners.

APPOINTMENTS AND CHANGES.—Prof. Karsten, the Professor of Botany in the University of Vienna, has finally been displaced. Dr. Douglass Powell has been appointed to the Chair of Materia Medica in the Charing-Cross Hospital, London, to succeed Dr. Headland, who was transferred to the Chair of Medicine in the same institution, vacant by the death of Dr. Hyde Salter. Dr. G. W. Davidson has been chosen to the Chair of Comparative Anatomy in the Royal Veterinary College, Edinburgh. Dr. A. P. Lankford is the successor of Prof. Paul F. Eve in the Chair of Principles of Surgery and

Topographical Anatomy in the Missouri Medical College. Dr. E. E. Phelps has been appointed to the Chair of General Pathology, and Dr. E. P. Frost to that of Theory and Practice of Medicine, in the New Hampshire Medical College. Dr. James Tyson has been appointed Curator of the Pathological Museum of the Philadelphia Hospital, *vice* Dr. William Pepper, resigned. Dr. Tyson has resigned the position of Microscopist which he has held for several years in the same institution. Dr. William M. Chamberlain has been appointed one of the physicians to the Charity Hospital, New York, to succeed Dr. Janeway, recently appointed to Bellevue Hospital as successor to Prof. T. G. Thomas. We understand that Dr. Nélaton has announced his intention of permanently residing in England.

THE LEGALITY OF NECROPSIES.—"The authorities of Guy's Hospital have again," according to the *British Medical Journal*, Oct. 14, "been summoned before the magistrates, accused of having opened a body without the permission of the friends of the deceased. It may be remembered that, to obviate the constant recurrence of such complaints as that now made before the public, a rule was made by the committee at the hospital to the effect that they reserved to themselves the right of making post-mortem examinations when deemed necessary. If the case were not likely to afford any very valuable pathological information, and the friends were much opposed to the examination, it was provided that a necropsy would not be insisted upon. This rule was printed and suspended in the admission-room, for the information of patients and their friends. We repeat that it seems to us an eminently just and judicious rule. Humanity and science are alike interested in the proper scrutiny of the conditions of hidden organs of those who have died of disease. It is a proper rule that patients dying in public institutions should render this last service to the humanity which has succored them. Nothing but an unworthy and ignorant prejudice opposes."

ILL-GOTTEN REVENUE.—Under this title the *Medical Times and Gazette* calls attention to the fact that the British government still derives some income from the sale of patent medicines. We quote the following passage, because it seems quite as applicable to this country as to Great Britain: "For the paltry sum of £68,000 odd the government allies itself with quacks and quackery, and gives the authority of its name to the 'genuineness' of the trash sold under the name of patent medicine. The amount of mischief inflicted by secret remedies is out of all proportion to the advantage which the stamp duty gives the state."

MORTALITY FROM SMALLPOX.—The number of deaths from smallpox in Philadelphia during the weeks ending December 16 and 23 were, respectively, 211 and 228, 267 of which were of minors.

A TOWN FULL OF SICK.—We learn from the *Wiener Medizinische Presse*, September 24, 1871, that in the little Hungarian town of Nagy-Enyed intermittent fever and other diseases prevail to such an extent that the native physicians—of whom there are three—have each three hundred patients to visit. This unfortunate sanitary condition demands also its offerings, since scarcely a day passes in this little town in which there are not three funerals.

THE NUMBER OF DOCTORS.—In Russia there is one doctor to every 17,800 inhabitants; in Prussia, one to every 3100;

in France, one to every 2600; in Great Britain, one to every 2500; in Italy, one to every 2200; in Holstein, one to every 2100; and in Hamburg, one to every 1230.—*Good Health*, November, 1871.

THE *Union Médicale* resurrects the following from an old journal: Edward Bright, born in Malden, county of Essex, died at the age of twenty-nine years, in a condition of extreme obesity. He was five feet nine inches in height, and measured from shoulder to shoulder three feet and some inches. His weight was five hundred and ninety-five pounds. His waistcoat could be buttoned around seven men of ordinary size without bursting it.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending	
	Dec. 16.	Dec. 23.
Consumption	44	51
Other Diseases of Respiratory Organs	45	62
Diseases of Brain and Nervous System	49	58
Diseases of Organs of Circulation	8	16
Diseases of the Digestive Organs	27	17
Diseases of the Genito-Urinary Organs	6	10
Zymotic Diseases	234	254
Cancer	9	4
Casualties	13	10
Debility	20	24
Intemperance	4	0
Malformation	0	1
Neglect	1	0
Old Age	14	12
Poisoning	1	1
Stillborn	23	16
Scrofula	2	2
Suicide	0	2
Syphilis	0	1
Tumors	1	1
Unclassifiable	8	10
Unknown	3	2
Totals	512	554
Adults	238	283
Minors	274	271

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM DECEMBER 5, 1871, TO DECEMBER 18, 1871, INCLUSIVE.

FRANTZ, J. H., SURGEON.—By S. O. 463, War Department, A. G. O., December 7, 1871, relieved from duty in Department of the Platte, to proceed to Baltimore, Md., and, on arrival, report by letter to the Surgeon-General.

GIBSON, JOSEPH R., ASSISTANT-SURGEON.—By S. O. 252, Department of the South, December 2, 1871, assigned to duty at Yorkville, S.C.

SMART, CHARLES, ASSISTANT-SURGEON.—By S. O. 269, Department of the East, December 14, 1871, granted leave of absence for thirty days, on Surgeon's certificate of disability.

CRONKHITE, H. M., ASSISTANT-SURGEON.—By S. O. 463, A. G. O., c. s., to report to the Commanding General Department of the South for assignment to duty.

HEIZMANN, C. L., ASSISTANT-SURGEON.—By S. O. 211, Department of the Platte, December 4, 1871, granted leave of absence for thirty days.

MONROE, F. LE B., ASSISTANT-SURGEON.—By S. O. 219, Department of the Platte, December 14, 1871, assigned to duty as Post-Surgeon at Fort D. A. Russell, Wyoming Territory, relieving Surgeon J. H. Frantz, U.S.A.

POWELL, R., ASSISTANT-SURGEON.—By S. O. 463, A. G. O., c. s., to report to the Commanding Officer Department of the Gulf for assignment to duty.

KIMBALL, JAMES P., ASSISTANT-SURGEON.—By S. O. 464, War Department, A. G. O., December 8, 1871, leave of absence extended sixty days.

WILSON, WILLIAM J., ASSISTANT-SURGEON.—By S. O. 463, A. G. O., c. s., to report to the Commanding General Department of the Missouri for assignment to duty.

MONDAY, JANUARY 15, 1872.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON A CASE OF SMOOTH WHITE KIDNEY.

BY JAMES TYSON, M.D.,

Clinical Lecturer on Diseases of the Urinary Organs in the University of Pennsylvania; one of the Physicians to the St. Joseph's Hospital, etc.

GENTLEMEN,—Since our last meeting the fatal termination of one of the cases we have been studying during the past two months has enabled us to complete its record; while the post-mortem appearances, in connection with the unusually complete history which has been obtained, will afford us a text for what I hope may not be unprofitable discussion. That you may the better recall the points of the case, I will read the connected notes.

John G., white, aged eighteen, is an upholsterer. When six years old, he had scarlet fever, followed by dropsy. This apparently disappeared under treatment, and he remained in moderately good health for six or eight years. About two years ago (July, 1869) he suffered from a second attack of dropsy, attended with much swelling of the legs and face. He had no fever, but his urine was scanty and often dark in color. No sufficient cause can be found for this last attack. He states that he had taken a bath but a short time before it came on, but was not overheated at the time. He was treated by several physicians, under whom he improved.

He first came to the University of Pennsylvania May 13, 1870, when his legs and feet were oedematous. His appetite and digestion were good. He was placed upon the solution of the acetate of iron. Under this treatment his general condition improved much, the oedema disappeared, and the albumen diminished, but remained considerable.

On March 23, 1871, he again presented himself at the clinic, when the following note was made: He complains of a sense of languor and weakness, and of being unfit for any bodily exertion; he also often feels chilly, and his feet and hands are cold. There is no oedema about the eyes, but that of the legs remains slightly,—is barely appreciable. He states that his legs become much more swollen at night. His appetite and digestion are good, and he has had no headache or convulsions. His urine is abundant, constantly amounting to sixty ounces in the twenty-four hours, and occasionally even to ninety ounces during this period; it is pale in color, and on standing a white flocculent deposit falls, forming about one-twentieth of its bulk. The sp. gr. is 1008; the reaction is slightly acid. On heating and adding muriatic acid, a considerable deposit of albumen takes place,—equal to about one-fourth of the quantity tested. Microscopic examination of the urine shows granular and hyaline casts. Occasionally an imperfect epithelial cell or a few oil-drops are contained in a cast otherwise hyaline. He is ordered gallic acid, gr. v, three times a day, with acetate of iron in the form of Basham's mixture.

May 4.—The gallic acid was afterwards increased to gr. xv three times a day, and again to gr. xv four times a day. The oedema disappeared entirely, and his general condition constantly improved, but the state of his urine as to the quantity of albumen and presence of casts remains unchanged. At this time he is feeling quite well, but weak; there is no dropsy; the albumen has diminished to one-eighth the bulk of the urine tested.

On May 14 epistaxis occurred, and continued two hours. On the 19th it recurred, and continued also two hours; and at 7 P.M. of this day it again recurred, and continued until 2 A.M. of the following morning. It was thought he lost at least a pint of blood. In these attacks, and after them, he complained greatly of precordial pain. Physical examination revealed the heart beating powerfully,—frequently, but regularly: it was evidently hypertrophied. The sounds of the heart were not typical, but there were no deviations which

could not be accounted for by existing hæmal changes. At this time the face was evidently swollen, but there was no appreciable oedema of the extremities. The acetate-of-iron mixture, which had been continued for some time, was now substituted by tincture of the chloride of iron and infusion of quassia; the gallic acid had been discontinued earlier.

A microscopic examination of the urine on the morning of the 22d of May revealed, in addition to the black highly-granular casts, an occasional apparently *solid* or cylindrical cast, of large size, and, therefore, probably from a tubule empty of epithelium.

On the evening of the 26th, epistaxis recurred, and continued four hours, but was not very abundant. The precordial distress was intense and the breathing labored, but the chest was resonant throughout, and nothing except the secondary cardiac affection could be discovered. He remained thus until the 28th, when the only convulsion he ever had occurred, in which he died, aged nearly nineteen years. His urine had been sufficiently copious until within forty-eight hours before his death, when it was partially suppressed.

A *post-mortem* examination, obtained only on condition that nothing should be removed, was made forty-six hours after death. The body presented no external peculiarities. The pericardium contained the normal amount of serum. The heart was enlarged, weighing thirteen and a half ounces, which, in a boy of nineteen, was considerable; the walls of the left ventricle were thickened, and the muscular structure was firm throughout the organ. The *semilunar valves of the aorta* and the *mitral valves* were markedly thickened, but there appeared no insufficiency, the hydrostatic test however not being applied; the valves of the right side of the heart were normal. The *lungs* were entirely healthy; there was little pleuritic adhesion and no effusion. There was no ascites. The *liver* was somewhat enlarged, and firm. The *spleen* was quite normal. Not the slightest fragment was allowed to be taken away, so that no microscopic study of the tissues could be made, but the gross characters were sufficiently distinctive. The *kidneys* were perfect examples of the *smooth white kidney*: the left weighed five ounces; the right was perceptibly larger, and weighed six ounces; they could not, therefore, be said to be enlarged, even when his age is taken into consideration, if the normal weight of the kidney of the male be placed at four and a half to six ounces (Reid). The right might perhaps be said to have been slightly enlarged; the left certainly not. On section, the normal relation of the convoluted to the straight portion seemed nearly preserved, but the former contrasted strongly in its almost pure white with what was about the normal tint of the straight tubes. The capsule was not unduly adherent.

Though no microscopic study of the kidneys could be made in this case, on account of the rigid adherence insisted upon by the friends of the patient to the promise we had made to remove no portion of the body, the gross appearances were unmistakably distinctive, and the minute characters of the smooth white kidney are well known. They consist in a plugging up and distention of the uriniferous tubules, especially in the convoluted portion, but sometimes also in the straight parts, by granules and occasionally globules of fatty matter. This granular matter is situated in the epithelial cells lining the tubules, where these are still present, but in many portions no trace of distinct cells is discernible, and the tubules seem choked up with black opaque granules. In this case these streaks could be traced with the naked eye, and I have no doubt would have exhibited, under the microscope, a composition of the kind indicated. In addition, perhaps, to containing in parts, at least, these same granular elements, the straight tubes undoubtedly contained, in certain situations, rods or hollow cylinders of transparent fibrine, since it will be recollected that these transparent casts were found in the later microscopic examinations of the urine. The Malpighian corpuscles are, of course, distended by the obstruction of the tubes below them, but otherwise are little changed.

I desire further briefly to ask your attention to the following points of interest in this case:

First, the *duration of the disease*. This undoubtedly extended from the time at which he had scarlet fever, at six years of age, to that of his death, at nineteen,—over a period, therefore, of thirteen years. For, late in his illness, his father informed me that during the six or eight years of apparent freedom from active disease there were frequent recurrences of swelling of the face. This would generally disappear without treatment, so that no significance was attached to it; though it was undoubtedly the symptom of a continuous kidney affection. Such a duration is quite unusual in this form of renal malady, but, on the other hand, is characteristic of the contracted granular organ.

Second, the *epistaxis*, which was most obstinate, calls for a brief allusion. This also occurs more frequently in the course of the contracted kidney, and is comparatively rare in the form of Bright's disease under consideration. But the cause of epistaxis in these cases is undoubtedly an altered state of the blood, and, secondarily, an impaired local nutrition, dependent upon such impoverishment. And wherever a renal affection is of sufficient duration, such a condition must ultimately result, whatever the special form of the disease; so that its occurrence in this case should not be looked upon as altogether anomalous, but rather as something to be expected wherever such alterations exist in the vital properties of the chief nutrient fluid.

A third point of interest—and, indeed, of unusual interest—was the *hypertrophy of the left side of the heart*. With regard to the occurrence of this symptom, we have the most explicit statements. Thus, Dickinson* says, "It is very rarely that simple hypertrophy of the left ventricle is associated with any form of renal disease except granular degeneration. I have never seen an instance, although I am not prepared to say it never happens." T. Grainger Stewart,† however, found it in thirty-eight per cent. of those dying in what he terms the second or fatty stage of the inflammatory form of Bright's disease, in which he includes cases of the "smooth white kidney."

When you remember, however, the cause of this hypertrophy, its presence need not be a matter of surprise to you. This cause is identical with what you have already learned to be the cause of the epistaxis,—a poisonous impurity of the blood, which necessitates increased activity and consequent hypertrophy of the propelling organ; and the resulting hypertrophy as well as the resulting epistaxis will occur wherever the disease is sufficiently prolonged, as in the present case.

It is not unreasonable to suppose that the probable secondary cause of hypertrophy in cases of contracted kidney—resistance to the passage of blood through the organ—was also efficient in this instance. For if you will but recall the description which I have just given you of the minute changes in an organ thus involved, you will readily perceive that the distended tubules, together with the adventitious granular matter between them and between the capillaries, must seriously encroach upon the calibre of the latter, thereby interfering with the progress of the blood through the organ.

The commonly short duration of cases of "smooth white kidney" amply accounts for the great rarity of hypertrophy in this form of disease as compared with the contracted organ, and partially also for the otherwise unaccountable discrepancy in the statements of Dickinson and Stewart.

Again, the slight degree of valvular disease here

present has the same cause. That it was in no way instrumental in bringing about the renal malady is evident from its slight extent, the early approach of the latter disease, and the fact that valvular disease of the heart, although an efficient agent in producing a chronically-contracted kidney, is never a cause of this form of Bright's disease.

As you are aware, we were not entirely satisfied of the correctness of our diagnosis in this case. The mode of origin of the disease (as a sequel of scarlet fever) and the quantity of albumen pointed to the smooth white kidney, while the duration of the affection and the cardiac hypertrophy suggested the contracted organ. The oedema was more persistent than in the latter form of disease, but during much of the time while the patient was under treatment was almost entirely absent. In this instance the casts did not afford as much assistance as they sometimes do. It will be recollected that there were forms granular in various degree, among which were those containing dense aggregations of black granules; hyaline casts both of the transparent almost invisible form and of the solid cylindrical shape; casts containing oil-drops, and casts containing an occasional epithelial cell generally fatty; there were also present compound granule-cells. Thus, every form was included except the typical epithelial-cast, the blood-cast, and the highly-fatty oil-cast, while no single form seemed to predominate. In reviewing, however, these forms, the utter absence of healthy epithelium, and the presence in greater abundance than is usually the case in the contracted organ of compound granule-cells and more irregular and smaller aggregations of fatty granules within the casts, together with the absence of free oil and intra-tubular oil in large quantity, pointed to the presence of the "smooth white kidney."

Let me add a few words with regard to the relative pathological position of these cases of smooth white kidney. You will perhaps be able to recall‡ the classification I prefer to adopt. Dividing Bright's disease into the acute and chronic forms, I would include in the former acute nephritis, whether scarlatinal or idiopathic; and of the chronic I make three subdivisions,—the fatty, granular (contracted), and albuminoid conditions. The fatty form, I have said, might originate in two ways, either as a sequel or continuation of the acute form into what is often called chronic inflammation, although all inflammation has generally subsided, or it may arise primarily as the result of a defective nutrition. Now, the *fatty kidney* is again distinctly divisible into two forms,—the *smooth white kidney* and the *large yellow fatty kidney*. The former is the more common sequel of acute Bright's disease, especially of the scarlatinal type. It is smooth, white, firm, not always much enlarged, as in the case under consideration. On section, the convoluted or cortical portion is white, contrasting strongly with the normally-preserved pink of the straight tubes or medullary structure. The width of the convoluted portion is often increased, yet not necessarily so, as was shown also in the present instance. The tubes are choked with so-called "exudation matter,"—probably the granular débris of epithelial cells. Generally fatal within three or four years, it is said by Dickinson and Stewart to be amenable to successful treatment. I have never seen a case of recovery, although I have seen the strength and general health of a patient temporarily restored while the urine still gave evidence of the existence of the disease; and that the duration may exceed the usual period is evidenced in the case we are now studying,—lasting apparently thirteen years. Dropsy is generally persistent, though less

* Dickinson, Pathology and Treatment of Albuminuria, p. 130, edition of William Wood & Co., New York, 1868.

† Bright's Diseases of the Kidney, p. 42, edition of William Wood & Co., New York, 1868.

‡ See a paper, by the writer of the present article, on the Pathology, Diagnosis, and Prognosis of the Different Forms of Bright's Disease of the Kidney, in Nos. 15 and 16 of the *Medical Times*, May 15 and June 1, 1871.

marked than that attending the large yellow fatty kidney, and the quantity of albumen, though considerable, is apt to be less: highly-granular casts, granule-globules, fatty epithelium in not very great abundance, are apt to be present with a pale, moderately abundant urine of low sp. gr. (1008). I believe it may succeed acute idiopathic nephritis as well as that following scarlet fever, but that very seldom if ever does it originate independently of previous acute inflammation.

The *large yellow fatty kidney* is more evidently fatty to the naked eye, is more apt to be yellowish in hue, and to be mottled by yellow fatty and red vascular spots. Oil is abundant in the tubules and their lining cells, and may be expressed. Dropsy is marked and persistent, and the quantity of albumen very large; the urine is apt to be less in quantity than that attending the smooth white kidney, is of higher sp. gr. (1015 to 1030), and contains numerous oil-casts, fatty epithelium, and free oil. The malady is invariably fatal, and generally within a year after its detection.

This form of fatty kidney, Dr. Dickinson thinks, is more frequently a sequel of the acute nephritis following exposure to cold than of the scarlatinal nephritis. I know not why it should not succeed scarlatinal nephritis; though I have never known it to do so. I believe it may originate primarily, especially in the intemperate. I have seen a case which I believed to have originated in this way, in the driver of a beer-wagon. The drivers of these wagons perhaps consume more spirituous liquors than any other set of laborers, because they are expected to invite the purchaser of every cask delivered to drink with them,—and whiskey is generally taken. The relation of the use of alcohol to renal disease is an interesting subject, with regard to which I will only say in this connection that less importance is attached to it than formerly, and that where such relation exists the tendency is to the production of fatty change in the kidney rather than to granular degeneration, as was once thought.

ORIGINAL COMMUNICATIONS.

CONTRIBUTIONS TO THE PHYSIOLOGICAL ACTION OF GETTYSBURG AND ADIRONDACK WATERS.

BY ISAAC OTT, M.D.,

Easton, Pa.

THE conclusions in the following paper are founded on a series of experiments which will be published in detail at some other time. The means employed were the same as those described in a paper on Congress water, published in No. 19 of the *Medical Times*.

GETTYSBURG WATER.

The observations were made during a period of six days. The quantity and quality of food and drink were nearly similar during the whole period, except that four hundred cubic centimetres of bottled Gettysburg water were taken early in the morning, before breakfast, in the last three days. The amount of sleep was the same, as was also that of exercise, although the intensity of the exercise on the afternoon of the second of the Gettysburg-water days was considerably greater than on normal days. The average temperature on normal days at three fixed periods was 60°, 64°, and 62° F., while the barometric mean at similar periods was 29.5, 29.5, 29.5. On Gettysburg-water days, the average temperature at similar periods as on normal days was 51°, 54°, and 52° F.; the barometric mean at the same periods was 29.6, 29.4, and 29.3.

On Gettysburg-water days the daily average excess of all egesta over those of normal days from 6 A.M. to 12 M. was 335.96 grammes; from 12 M. to 6 P.M. the daily average decrement was 31.8 grammes; and from 6 P.M. to 6 A.M. the daily average increment was 2.9 grammes, making the total daily average excess of all egesta 307.0 grammes. On Gettysburg-water days the daily average excess just mentioned from 6 A.M. to 12 M. was made up of increase of "insensible perspiration" 24.06 grammes, of renal excretion 333.9 grammes; the intestinal excretions were diminished 22 grammes; the daily average decrease from 12 M. to 6 P.M. was formed of an increase of "insensible perspiration" 105.8 grammes, and a decrease of renal excretion equal to 118.05 grammes, and of intestinal excretion 19.6 grammes; the daily average increase of excretion from 6 P.M. to 6 A.M. was made up of a decrease of insensible perspiration 64.9 grammes, and an increase of renal excretion 67.8 grammes. The excretion of urea for the three normal days was 31.17, 29.53, and 32.96 grammes, the arithmetic mean of which is 31.22 grammes. The ureal excretion on Gettysburg-water days was 32.07, 29.72, and 32.14 grammes, the arithmetic mean of which is 31.31 grammes, thus showing an increased daily excretion of urea by .09 grammes. On the days when Gettysburg water was ingested there was a daily decrease of uric acid .065 grammes, of phosphoric acid .09 grammes, of chloride of sodium 1.27 grammes, and a daily increase of sulphuric acid .47 grammes. There was a relative increase during the use of Gettysburg water, and the most reasonable explanation of the increase seemed to be the retention of water. Thus it would appear that the retention of water whilst Congress water is being taken is not unique as regards our own economy.

ADIRONDACK WATER.

The observations on the physiological effects of this water extended over six days. The food was nearly the same in quantity and quality; exercise, sleep, study, and so on were as similar as possible. The drink was the same in quantity and quality in exact series of days, except that six hundred cubic centimetres of bottled Adirondack water was taken half an hour before breakfast during the last three days. The average of the temperature on normal days at three fixed periods was 63°, 64°, and 58° F., while the barometric mean at the same periods was 29.7, 29.6, and 29.6.

On Adirondack days, at similar periods, the average temperature was 60°, 64°, and 55° F.; the barometric mean 29.8, 29.7, and 29.7. The daily average excess of all the excreta during the ingestion of Adirondack water over those of normal days, from 6 A.M. to 12 M., was 552.3 grammes, from 12 M. to 6 P.M. 58.5 grammes, while from 6 P.M. to 6 A.M. there was a decrease of 131.3 grammes: thus making a total daily excess of all excreta 479.5 grammes. The aforementioned excess of excreta from 6 A.M. to 12 M. was made up of an increase of insensible perspiration 68.86 grammes, and of renal excretion 496.78 grammes, and a decrease of intestinal excretion 13.4 grammes; from 12 M. to 6 P.M. the excess was derived from increase of insensible perspiration 109.38 grammes, a decrease of renal excretion 90.40 grammes, and an increase of intestinal excretion 39 grammes; from 6 P.M. to 6 A.M. the decrease was made up of an increase of insensible perspiration 13.36 grammes, and a decrease of renal excretion 144.75 grammes. The urea excreted on the three normal days was 19.42, 20.91, and 16.07 grammes, the arithmetic mean of which is 18.80 grammes. On Adirondack days the urea amounted to 20.37, 19.05, and 18.64 grammes, the arithmetic mean of which is 19.35 grammes,—thus showing a daily increase of urea .55 grammes. On Adirondack days the daily average increase of sulphuric

acid was 1.11 grammes, of phosphoric acid .04 grammes, of chloride of sodium 1.64 grammes. While there was a daily decrease of uric acid .176 grammes, there was also a relative increase of weight on Adirondack-water days, which seemed, as in the cases of Congress and Gettysburg water, to be most logically accounted for by the retention of water, although during the experiments with the latter two the retention was in the afternoon, while during those with the Adirondack water it was mainly at night.

PROTRACTED GESTATION AND LABOR, COMPLICATED WITH PUERPERAL CONVULSIONS.

BY E. P. BERNARDY, M.D.,
Philadelphia, Pa.

ABOUT the 1st of August, 1871, I was requested to examine Mrs. E. K., æt. 18, married two years, and who had been regular in her menstrual periods up to the 20th of November, 1870. At the following period, December, 1870, no sign of menstruation had occurred. I found that two hundred and fifty-four days had elapsed since her last period, and placed her expected time at September 1 to 10 of the present year (1871). The time having arrived, there was no sign of labor, her only complaint being, "I am tired; I wish it was all over." On the 22d of October general anasarca set in. On the 26th Dr. K. Gilbert was called in consultation. He advised waiting a few days. On the 30th of October, labor set in at 5 A.M. Being called at 7 A.M., after delay, I made an examination, when I found the os dilated to about the size of a silver quarter of a dollar, and the head presenting, but was unable to make out the position. I was again sent for at 3½ P.M. At four and a half o'clock, I found the pains very slight, but the os dilating. At five o'clock, the bag of waters ruptured, and I diagnosed the sixth position, the occiput being towards the promontory of the sacrum. While I was making the examination, the patient went into convulsions. Her face became at once livid, her lips and tongue perfectly black. I sent for Drs. K. Gilbert and C. Merklein, and in the mean time I attempted to bleed, but without success. I applied the forceps, but could not move the head. Dr. Merklein having arrived, another attempt was made to bleed, but the vein was almost severed before blood could be drawn; and when it did flow, it flowed slowly, having the appearance rather of thick, black molasses than of blood. Only three ounces were obtained. The convulsions still continuing, the patient was chloroformed, the forceps were reapplied, and, after some trouble, the head was delivered,—the child, a male, being stillborn.

The mother continued in convulsions up to four o'clock the next morning, having thirty-three convulsions in the space of little over nine hours. She remained two days unconscious, and on the morning of the third day, recognizing me, she asked for her babe, speaking for the first time intelligently since the night of her delivery.

In the short space of eight hours three drachms and two scruples of the hydrate of chloral were given. It was only after eight scruples had been taken that the medicine seemed to quiet her. After taking the ninth scruple she fell into a light sleep for half an hour, waking up in convulsions. Another scruple of the hydrate was then given, which gave her a sleep of an hour and a half, which was again interrupted by convulsions. The hydrate (Hj) was again repeated, with the effect of producing a sleep of five hours, after which the convulsions were completely arrested. In conjunction with the hydrate of chloral, carbonate of ammonia, bromide of potassium, whiskey, and mustard-plasters were used.

The child was enormous, weighing fifteen pounds, and, when dressed, appeared as if it were three months old instead of a few hours. The proportions of the head were as follows:

Circumference	15 inches.
Occipito-mental diameter	8 "
Fronto-mental "	4½ "
Occipito-frontal "	6¾ "
Length of the body	26½ "
Weight of the body	15 lbs.

There is no doubt whatever of the above case being one of protracted gestation. The last time the patient had her menstrual flow was on the 20th of November, 1870, since which time she has seen nothing; therefore our estimate commences from the 20th of November, 1870, which would put her expected time of labor at about the 1st of September, 1871, making ten lunar months; but, instead, she carried till the 30th of October, or about three hundred and forty-four days.

The case is also interesting as showing how much hydrate of chloral can be given in convulsions without any bad effect. As above stated, eleven scruples (220 grains) were given in the short space of eight hours; the medicine seemed only to quiet her. There was no deep sleep, the patient being easily awakened. There is no doubt that the preparation was of the best quality, the medicine being furnished by Messrs. Samuel Campbell & Co.

The patient is now (November 25) able to attend to her household duties.

[The above communication comes to us from a responsible source, and is therefore published; but we cannot agree with the writer of it in thinking that the child was carried so long a time as three hundred and forty-four days. By the French and Scotch law a child is declared illegitimate if born more than three hundred days after the death or absence of its reputed father. Liegard has reported one case in which the gestation is said to have been protracted up to three hundred and thirty days; but this is, to say the least, doubtful. It seems infinitely more probable that the woman in the case reported above made a mistake in her calculation,—no uncommon circumstance, by the way,—and that conception did not take place until a period long subsequent to November 20.—ED.]

MUCOUS CASTS OF THE INTESTINE.

BY WILLIAM C. KLOMAN, M.D.,
Baltimore, Md.

ON November 20, 1871, I was sent for to see a young woman, aged about thirty, who was very much alarmed at having passed some long, gelatinous bodies, which she supposed were "worms" partially decomposed. She stated that several days before she had passed similar bodies, but took no further notice of them, and it was only their recurrence that excited alarm. She had no special complaints to make of feeling unwell: the passage of the bodies had caused pain. Her appetite was good; tongue clean; no febrile symptoms; bowels constipated. These bodies were passed by themselves, no fecal masses accompanying them. Deep pressure over each iliac fossa elicited tenderness. There was nothing like tenesmus and no frequent calls to stool. She exhibited to me about as much as could be held in the two hands of what I recognized by the naked eye as cylinders of a clear, vitreous, tough mucus. Two of these cylinders were twelve to fourteen inches long, with some shorter pieces, and they varied in thickness, being in places as thick as the thumb, but generally somewhat less. I prescribed for her a purgative dose of mass. hydrarg. with ext. colocynth. comp., and a draught containing potassæ bicarb. with tinct. colomb., each dose containing fifteen grains of the former and one drachm of the latter, to be repeated every four hours. The cylinders I took with me for microscopic examination. They proved to consist of a tough mucus. They contained also delicate fibrils, mucus-corpuscles, some scales of pigment, and an abundance of columnar epithelium.

The purgative dose acted freely, and my patient has

passed no similar masses since. She seems to be entirely relieved, there being no longer any tenderness on pressure.

Beale, in his work on "The Microscope in Clinical Medicine," third edition, Lindsay & Blakiston, p. 195, mentions a somewhat similar case, except that in the case under my care the cylinders were not hollow, but, as far as I could judge, were solid. Neither was there the long-persistent pain before passing the casts.

I exhibited the casts and related the case at the last meeting of the Baltimore Pathological Society, and found that none of the gentlemen present had had any similar cases under their care.

AN OBSTINATE CASE OF TETANUS.

BY GEORGE McCLELLAN, M.D.,

Philadelphia.

T. K., an Irish boy, nine years of age, was run over by a car on the Reading Railroad on the 21st of September, 1871, his foot being severely lacerated. Two days after, when I saw him for the first time, there was mortification of the toes, with indications of its tendency to spread over the whole foot. Carbolic acid was applied, and opiates were given to relieve the pain, which was excessive in the ankle. In a week's time the mortification was checked, and, granulations beginning to appear, the boy was placed under the influence of ether. An examination of the foot was made, with the expectation that it would be necessary to amputate it. It was found that the bones were sound, with the exception of the external malleolus, which had had a piece slivered off of it, and, although the injury to the soft parts was extensive, it was thought best to endeavor, if possible, to save the foot. Tonics and nutritious diet were administered. Every means calculated to promote healthy action was resorted to, but on the third day after the examination symptoms of locked-jaw began to appear in the little patient, whose nerves had been in an overstrained condition ever since the shock of the accident.

He had always been hard to govern, and now became more unmanageable than ever; but the nervous tension had begun to abate a little, when, in a fit of restlessness, he tossed the injured limb against the side of the bed. Frequent poultices had been used to keep up a full discharge from the wound, and of course the tissues were softened. The sudden blow threw him into a paroxysm of pain, and, the integument being wanting, the ligaments about the ankle snapped asunder. By the spasmodic action of the tibialis posticus and the flexor longus muscles, the foot immediately assumed that form of deformity known as *talipes varus*.

Opisthotonos with locked-jaw ensued, and persisted in spite of every remedy. The locked-jaw and muscular rigidity of the neck yielded a little after the fifth day, but with this exception there was not the slightest relaxation until the expiration of the twenty-fifth day. At first, hot baths and external applications along the spine were employed without any effect; but the patient's inability to take any nourishment made the case seem hopeless. By persevering, however, from day to day, life was prolonged. Neither the tincture of cannabis indicus, nor Calabar bean, nor opiates, proved of any avail in diminishing the tetanus. The mistura assafoetidae and bromide of potassium and the much-recommended chloral were equally unsuccessful. The bowels were moved by oil, and nitre was given to clear the urine. He was permitted to take any kind of food, without discrimination. As soon as his appetite was aroused, the bowels were again thoroughly cleared out with oil. He was put upon a diet consisting of beef-tea, milk-punch, oysters, etc., and upon the tincture of the chloride of iron, alternated with Huxham's tincture of bark. On the twenty-fifth day there was a slight change for the better, but his pulse continued 100°, as it had been for the previous fortnight. His tongue cleared off, and after the lapse of two more days the tetanic symptoms gradually subsided. The beef-tea and iron were continued, and on the thirty-seventh day after the receipt of the first injury the patient's strength was thought

sufficient to enable him to undergo the operation, which his second accident had rendered inevitable.

Amputation of the leg was performed on the 29th of October. The method adopted was that of Lenoir, a modification of the circular operation, and left a serviceable stump at the middle third of the limb. The boy is now (December) in the enjoyment of perfect health, and is able to go to school, having already learned to use his crutches with safety.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

CLINIC OF PROF. AGNEW, SEPTEMBER 27, 1871.

Reported by Dr. Elliott Richardson.

COLLES' FRACTURE OF RADIUS.

ON Sept. 27, 1871, a woman, 50 years of age, was brought to the clinic, who had fractured her left radius the previous Saturday week. The case had been judiciously treated, and but little deformity was therefore evident; but upon grasping the radius both above and below the point of suspected fracture, abnormal mobility and crepitus were distinctly perceived. Prof. Agnew then described the three different forms of fracture which occur at the lower end of the radius, viz.: Barton's, Smith's, and Colles'.

Barton's fracture must necessarily extend into the carpal articulating surface of the radius, and may consist in the detachment either of the posterior edge of this surface, or of a triangular fragment of bone, including the styloid process. Smith's fracture occurs at a point from 2 inches to 2½ inches from the articulating surface of the radius, and Colles', which is probably the most frequent of the three forms, is intermediate between the others. It is usually oblique, and produces a marked deformity. In consequence of the muscular attachments to the hand, wrist, and forearm, the upper fragment of the radius is drawn forward, while the wrist with the lower fragment is drawn backward and upward. In consequence, also, of the loss of the support of the radius to the wrist, the hand is strongly flexed to the radial side, and the wrist drawn from the ulna, the styloid process of which becomes very prominent; a deformity which it is exceedingly difficult to reduce. The deformities produced by the three forms of fracture at the lower end of the radius resemble one another closely. The treatment is the same in all, and consists in binding the arm upon a Bond's or a pistol-shaped splint so turned as to abduct the hand from the radial side when fitted upon it. The palm of the hand rests upon a wooden pad, so as to admit of motion of the fingers without disturbing the dressing.

In applying this splint, two wedge-shaped pads must be used,—one with the base upward, to be placed upon the dorsal surface over the projecting lower fragment, and the other with the base downward, upon the anterior surface of the arm over the extremity of the upper fragment. By means of these pads we are in most cases able to correct the antero-posterior deformity, and by the flexion of the hand and carpus to the ulnar side through the aid of the splint we endeavor to overcome the lateral displacement and prevent the projection of the lower end of the ulna.

In treating a recent fracture, the dressing should, at first, not be very tightly applied, and the case should be seen frequently by the surgeon, in order that, should much swelling occur, the bandages may be loosened. Usually the dressings have to be removed and reapplied once in twenty-four hours for the first day or two, or until all disposition to swell has ceased, after which they should be disturbed as little as possible.

On the twelfth or fourteenth day, daily passive movements of the joints of the injured limb may be commenced, and at the end of four weeks, in ordinary cases of Colles' fracture, the splint may be dispensed with. In spite of the utmost care in the treatment of this fracture, there is always more or less stiffening of the wrist and finger-joints resulting, due to

some extent to the adhesions which always form in joints kept at perfect rest for a long time, but principally to the involvement of the tendons which pass over the seat of fracture in the inflammatory changes resulting in the production of union of the divided bone.

This must be treated by the frequent application of some stimulating liniment, or by bathing the part twice a day in warm water and soap, and by passive motion of the joints. Under this treatment the usefulness of the member will gradually return.

FRACTURE OF CLAVICLE.

On the same day a little boy, 3 years of age, was brought before the class for examination and treatment. Nine days previously he had fallen upon the floor, sustaining serious injury of one shoulder. The nature of this injury became very evident as soon as the shoulders were exposed. An abnormal prominence, situated in the outer third of the clavicle of the injured side, was seen, and the shoulder of that side was lower than the other. A fracture of the clavicle had been sustained, and the prominence seen was due principally to the sheath of callus around the seat of fracture. Prof. Agnew said the deformity produced by fracture of the clavicle is not so great when the fracture occurs in the outer third as when it takes place at a point nearer the sternum, nor is it in any case so great in young children as in adults.

The characteristic deformity consists in the shoulder dropping downward, forward, and inward. When the fracture is complete, and is not situated within the limits of the coraco-clavicular ligament, the displacement of the fragments is always great. The inner fragment remains stationary, or nearly so, but the outer fragment is depressed and drawn inward towards the sternum, so that the distance between this bone and the acromion process becomes much shortened.

The indications for treatment are, therefore, to use means to draw the shoulder and with it the outer fragment upward, outward, and backward. In no other way are these indications so completely fulfilled as by placing the patient upon his back with his head and shoulders upon a level with the rest of his body; but this position soon becomes so irksome that it is often impossible to keep the patient sufficiently quiet. The three bandages of Desault, the pad and sling known as Fox's apparatus, and modifications of these, are therefore usually preferred. In children, however, the difficulties of retaining any of these forms of apparatus are so great that adhesive strips can be used to greater advantage. In the present case these were used with a pad in the axilla.

In about three weeks, the lecturer said, it would be safe to remove the dressing.

STRANGULATED INGUINAL HERNIA.

The next case was that of a man, aged 70 years, who had had an indirect inguinal hernia of the left side for the past three or four years. During this time it came down frequently, but was easily returned. The previous night, however, he could not reduce it, and pain at the seat of hernia and in the umbilicus supervened upon attempts to do so, and was soon followed by tympanites. The characters of the tumor were such as to leave no doubt of its nature, and the symptoms above detailed, even without the existence of vomiting, so commonly associated with strangulated hernia, were of a nature to prove the existence of strangulation. The lecturer said he would first apply taxis without etherizing the patient, and if unsuccessful would then produce anæsthesia. If this failed, opium suppositories, leeches to the groin, and cold application to the tumor would be resorted to.

The patient was placed in the recumbent position, with his knees and shoulders elevated. The tumor was seized and drawn downward below the external abdominal ring, and, being compressed, was pushed into the abdominal opening. The thumb and fingers of one hand were then applied on either side of the tumor, so as to retain the hernial contents in the canal and prevent it from being pushed between the layers composing the abdominal walls. By this method the hernia was easily reduced without ether. The patient was directed to wear a truss constantly when on his feet.

PENNSYLVANIA HOSPITAL.

CASE OF ACUTE ABSCESS OF THE LIVER.

SERVICE OF JAMES H. HUTCHINSON, M.D.

Reported by GEORGE S. GERHARD, M.D., Resident Physician.

MATILDA I., colored, æt. 23, single, was admitted December 6, 1871.

Her previous health had been good. With the exception of an attack of typhoid fever four years ago, which confined her to her bed for four weeks, she had never been laid up by sickness until the present time. She had never had malarial fever.

She stated that she had not been feeling well for three weeks previous to her admission to the hospital, but that she had not considered herself ill enough to stop her work, which was that of a domestic, until the evening preceding her admission. Three days before her entrance into the hospital, while sitting quietly in the house, she was suddenly attacked by a stabbing pain in the lower part of the right chest. This pain, she stated, had persisted, at times getting better and then worse again, until the day after her admission to the hospital. She had had no cough.

On admission, the patient was suffering intensely from pain in the lower part of her right chest, and was breathing very hurriedly; when she exerted herself, as in walking, the respirations became almost panting. Her skin was hot and dry. Her eye was perfectly clear. The pulse was frequent and feeble. The tongue was heavily coated with a white velvety fur. The bowels were confined. There was no abdominal tenderness. Physical examination of the chest revealed some relative dullness over the lower lobe of the right lung posteriorly, with broncho-vesicular respiration and a suspicion of pleuritic friction. A Dover's powder and counter-irritation to the right side of the chest were prescribed.

On the 7th, the patient passed a tolerably comfortable night. She has vomited once or twice this morning, but does not complain of pain. The skin is still hot, and the pulse is frequent. She was ordered a tablespoonful of neutral mixture, with a soothing dose of morphia, every third hour. The urine has been examined, but was not found to contain anything abnormal.

On the 8th, the general symptoms are unaltered. The bowels were very freely moved after a mild saline. The tongue remains heavily coated, but retains its moisture. She has complete anorexia.

A.M., temp., $102\frac{1}{2}^{\circ}$; pulse, 100. P.M., temp., 101° ; pulse, 112.

On the 9th, the patient complains of pain in the lower part of the right chest, especially when she takes a full breath. There are now positive dullness on percussion over the lower part of the right chest posteriorly, and a well-marked pleuritic friction-sound. The respiration is still broncho-vesicular in this region. She was ordered to be wet-cupped to four ounces, and to have a poultice applied.

A.M., temp., $102\frac{1}{2}^{\circ}$; pulse, 100. P.M., temp., 102° ; pulse, 112.

10th.—She is free from pain to-day. The condition of the tongue remains unchanged. The bowels are quiet.

11th.—The patient is again complaining of pain in the lower part of the right chest. She is breathing hurriedly. There are no new physical signs. A blister to the chest and Dover's powder in five-grain doses every fourth hour were ordered.

A.M., temp., $103\frac{1}{2}^{\circ}$; pulse, 116. P.M., temp., 99° ; pulse, 116.

12th.—A.M., temp., 101° ; pulse, 100. P.M., temp., 102° ; pulse, 112.

13th.—A.M., temp., 103° ; pulse, 112. P.M., temp., 104° ; pulse, 116.

14th.—The dullness on percussion in the region before indicated is to-day more marked; the friction-sound is distinct.

A.M., temp., 102° ; pulse, 116. P.M., temp., 104° ; pulse, 104.

15th.—A.M., temp., 101° ; pulse, 100. P.M., temp., $102\frac{1}{2}^{\circ}$; pulse, 112.

16th.—The bowels were frequently disturbed last night.

The tongue is moist, and as heavily coated as before. The abdomen is meteoric, but not tender.

A.M., temp., 102°; pulse, 100; resp., 36. P.M., temp., 102°; pulse, 120; resp., 36.

17th.—The bowels were moved several times last night. A mineral acid and quinine mixture was prescribed.

A.M., temp., 101°; pulse, 120; resp., 44. P.M., temp., 101°; pulse, 128; resp., 52.

18th.—The diarrhoea continues. The dejecta are liquid, and contain greenish masses resembling cooked spinach. To-day there is marked dulness over the posterior part of the right chest from a point one inch below the spine of the scapula to the last rib. The pleuritic friction-sound still exists, with broncho-vesicular respiration. The vocal fremitus is feeble over this part of the chest. Anteriorly dulness extends from the third interspace on the right side to a point one inch below the costal border. The edge of the liver can be felt projecting below the border of the last rib.

A.M., temp., 102°; pulse, 120; resp., 36. P.M., temp., 102½°; pulse, 128; resp., 36.

19th.—The patient still has diarrhoea. She is weak, and is evidently sinking. The respirations are very frequent. The pulse is frequent and exceedingly feeble.

A.M., temp., 102°; pulse, 132; resp., 52.

Death occurred at 3 P.M., after a well-marked convulsion.

The autopsy was made five hours after death. The rigor mortis was feebly pronounced. The heart was found healthy. The lower half of the right lung was adherent by many recent and easily-torn bands to the costal pleura, and somewhat congested. There was no fluid in the pleural cavity. The left lung was perfectly healthy.

The right lobe of the liver was considerably enlarged and adherent to the under surface of the diaphragm. This part of the liver was the seat of an abscess, the cavity of which contained a large amount of creamy pus. The wall of the abscess was formed by softened hepatic tissue. The tissue of the left lobe was rather pale, but in other respects presented a normal appearance. The gall-bladder was distended, but did not contain any calculi.

The kidneys and spleen were healthy. The mucous membrane of the small intestine was injected in many places, but entirely free from ulceration. The patches of Peyer and the solitary glands presented a normal appearance. The large intestine was healthy.

This case of hepatic abscess is particularly interesting on account of the obscurity of the symptoms and the rapid course that it pursued.

The patient died on the thirteenth day after her admission to the hospital. She had been complaining for three weeks previously of an obscure feeling of malaise; but it is difficult to say whether this had any connection with her disease. Until the occurrence of the pain in the chest, three days prior to her admission, she had had no marked symptom, and certainly none of hepatic disease.

There was also an entire absence of the usual symptoms of hepatic disease while the patient was in the hospital, with the exception of marked enlargement of the liver.

Rigors and perspirations, and pain in the region of the liver, never occurred. The pain that the patient suffered was always referred to the posterior part of the right chest, and was accounted for by the pleurisy that existed.

EPISCOPAL HOSPITAL.

SERVICE OF DR. J. V. INGHAM.

CASE OF CANCER OF THE STOMACH, PRODUCING COMPLETE PYLORIC STENOSIS.

Reported by FRANCIS L. HAYNES, M.D.,

Resident Physician.

F. S. first visited the hospital dispensary, July 30, 1870. He was forty-nine years of age, married, a native of Germany, and by occupation a hostler. His father, he stated, died at the age of eighty-eight, from an unknown cause; his mother at sixty-two, from abdominal "dropsy." Excepting

these somewhat undefined facts, he was ignorant of the medical history of his family.

The patient enjoyed good health until the year 1865. Since that date he has had uneasiness or pain in the region of the stomach after eating or drinking. For four months preceding his visit to the dispensary he vomited every evening what seemed to him all the food he had eaten during the day. Except in the evening, he has been entirely free from vomiting. During this period he has suffered from a constant sense of "fulness in the stomach," relieved but slightly by the vomiting; he has not had any actual pain. Since the vomiting commenced, his bowels have been very constipated. His strength has gradually failed.

At the time of his visit he continued to have all the symptoms described in the previous history.

He was treated at different times by means of purgatives, bismuth, ipecacuanha, blisters to the epigastrium, and various other remedies, but none of them produced any amelioration of the symptoms, except the blisters, which relieved the sense of fulness to a great degree. He became too weak to leave his room, and was then visited at his home. He was finally ordered to confine himself exclusively to a liquid diet (beef-tea and whiskey-punch) and to take one minim of hydrocyanic acid (U.S.P.) three times a day. The bowels were kept open by simple injections. The effect of these measures was to produce immediate relief, and for a time the patient improved to such an extent that he was able to take short walks every day.

On August 22 his condition was thus described: He is emaciated. The skin is wrinkled,—of a straw-yellow color. The naso-labial furrows are very deep; the conjunctiva pearly-white. The tongue is slightly furred. Complete anorexia exists, as has been the case since the vomiting set in. No vomiting since he has been put on a liquid diet.

Physical examination.—The epigastric region generally is obscurely dull on percussion, and on pressure over it the fingers meet with more than the natural resistance, though no tumor can be detected. No tenderness exists.

August 26.—The patient has vomited once since the last visit, the result of indulgence in solid food. On causing the abdominal walls to be relaxed, a bulging of the epigastric region can be detected. The dulness on percussion in that situation is more marked. On palpation, however, the fingers cannot detect a tumor.

September 1.—Since the last visit, the patient has vomited several times, and at all periods of the day, without apparent cause. The vomit, which previously consisted of altered food, presents now a black granular appearance, resembling that of coffee-grounds. On microscopical examination, no morphological element except shrivelled blood-corpuscles can be detected. He has passed similar material by the bowels.

September 18.—A distinct, hard, uneven ridge can be felt passing across the central portion of the epigastric region.

The vomiting of altered blood continued, unchecked by remedies: it was not copious, but occurred once or twice daily. The patient gradually sank, refusing to take nourishment for forty-eight hours before his death, which occurred on October 6, 1870.

Autopsy, twenty-four hours after death.—The abdominal organs only were examined. The lesser curvature of the stomach, its posterior wall, and its pyloric extremity were transformed into a dense mass of scirrhus. The pyloric orifice was completely closed by the encroachment of the disease. On holding the stomach so as to form a bag, and pouring water into it, not a drop passed through the pylorus. The internal surface of the mass near the pylorus was deeply ulcerated. Surrounding this ulceration for some distance the surface was softened, as if ready to melt away. The stomach contained a quantity of material similar to that which was vomited during life. The liver was about two-thirds its normal size. The pancreas was small. The intestines were greatly diminished in calibre. The diameter of the colon was not greater than that of the normal jejunum.

No traces of cancer were discovered in any other of the abdominal organs.

On microscopic examination of the tumor, its minute structure was found to be that of ordinary hard cancer.

ABSTRACTS.

BY ROBERT STONE, M.D.,

Irvington, N.Y.

THE MODE OF TRANSMISSION OF CHOLERA IN INDIA.—Pettenkofer collects (*Centralblatt Med. Wiss.*, lxxi. 34) the successively published etiological investigations on cholera in India. Judged according to numbers, the Indian physicians are principally contagionists, although in different degrees according to the kind of contagion. Of four hundred and eighty-one, thirty-three, for example, assert the portability from person to person, while only five deny the contagiousness of cholera altogether and the inoculation through the intestinal dejections. At the head of the majority in this respect stands Macnamara, in an extensive work on the different modes of infection. He considers the contact with those affected, their excrements and clothes, as a frequent cause of the disease, and narrates several apparently very striking examples of infection from the drinking-water. He especially uses, however, for his views on the transmission of cholera, the return of the great pilgrim festival at Hurdwar which preceded the outbreak of the disease in 1867. Three million of people went forth from a camping-ground of about one square mile, where already several cases of cholera had occurred, and spread over all India. The advocates of contagiousness strive to prove that at that time this impregnated stream of mankind covered the land with cholera as they radiated from that centre. This view Bryden most decisively opposes, and combats by the most extended and most critical investigations the views of the miasmatisers. He shows, in the first place, by his charts of the epidemic of 1867, that its boundaries, and even the direction which the disease took, by no means corresponded with the paths of the pilgrims,—that, among others, Central India remained at that time free from cholera. For this and for the previous epidemics Bryden had access to a very large and complete mass of material,—the inhabitants of 78 garrisons with over 130,000 men, and the 40,000 to 50,000 inmates of 128 prisons. From the careful investigation of these cases Bryden attempts to disprove the views of the advocates of the contagion theory, and to prove that the quarantine which has been so long and so strenuously enforced in India is useless, and especially to substantiate the theory of local infection, incubation, and the need of a change of locality. He employs for this purpose partly cases of ships, and, in part, gives some striking facts from the marchings of Indian regiments.

Bryden's investigations culminate in this, that the vicinity of the mouths of the Ganges and Brahmaputra from the earliest times presented an endemic region of cholera. Besides this naturally somewhat varying boundary, the disease occurs epidemically in various parts, which may be grouped together by their essential meteorological characters. The *primus agens* for the production of cholera in the epidemic cholera provinces are rain-winds and monsoons, which, on the one hand, influence the moisture of the ground, and, on the other, are direct carriers of the disease, and precede it step by step in its wanderings. Besides this, the cholera has its especial times of the year: for the endemic region, the hot dry season (April); for the majority of the epidemic regions, the months of February, March, and April. In Calcutta, this spring cholera occurs typically; in the Punjab, monsoon cholera. Madras has a double cholera period in the year.

Pettenkofer combines the investigations of the spread of cholera in India and in Europe under seven heads. In these he gives all credit to Bryden's work, and partly also to his monsoon theory, and subscribes to his proofs against the absolute contagionists. He nevertheless admits how strongly the experiences outside of India militate against the views of those miasmatisers "who regard the influence of the human intercourse as unessential, and believe the cholera to be disseminated by the winds or autochthonously." In his opinion the influence of human intercourse in the production of cholera stands next in importance to the state of moisture of the ground; the number of those attacked will be essentially modified by individual predisposition. (This latter was in this case much greater among Europeans than among the inhabitants of India.) On

the other hand, the very observations made in India are calculated to show the insufficiency of the theory of those who would explain the local and temporary occurrence of cholera as the result of the drinking of contaminated water.

SOME OF THE GENERAL PHENOMENA CONSEQUENT UPON EXTENSIVE BURNS OF THE SURFACE.—Falk, in a communication on this subject (*Virchow's Arch.*, 1871, liii., 42 Stn), says that in rabbits or dogs in whom the skin has been burned during narcosis produced by subcutaneous injection of morphine with the subsequent use of chloroform, the temperature sinks in the rectum at first rapidly, then more slowly, but continuously up to death. "Respiration ceases first at 19° C., or even at a lower temperature; the heart pulsates a short time longer." From the similar condition of animals whose skin has been varnished, a cessation of the transpiration of the skin consequent upon burning has been assumed. Such is not the fact, according to Falk; for while frogs deprived of their lungs, and the greater part of whose surface has been covered with a layer of india-rubber, very soon die, those animals in whom a similar extent of the surface has been merely burned, live much longer; in the same way, in rabbits, the activity of the perspiration of the skin is retained after scalding, if care be taken to prevent excoriations. Sulphuretted hydrogen acted fatally through their skin, entirely as in animals in a normal state. Neither can retention of the products of exhalation (ammonia and the fleeting fatty acids) be assumed, since these substances introduced into the blood produce partly a different order of phenomena, or only do so at entirely disproportionate doses. Besides, the secretive powers of scalded portions of the skin are not destroyed; for Falk was able after injection of iodine to demonstrate the presence of traces of the iodine in a distant burn-vesicle. Furthermore, Dr. Falk comes to the conclusion, after his experiments under the guidance of Rosenthal, that the cause of the depression of temperature with the increased loss of heat is to be sought in the skin. In animals burned on one side only, the temperature is indeed higher on that side than on the uninjured side, but the decrease of temperature shows itself in an equal space of time unmistakably greater on the injured than on the sound side. A certain quantity of water was raised to a higher temperature by a scalded rabbit under the influence of chloroform, than by the animal under chloroform only, other circumstances being equal. The increased transmission of warmth is the consequence of the dilatation of the vessels attacked by the heat. This dilatation Falk regards as independent of nerve-influence, because the dilatation and the increased transmission can also be produced in scalding of extremities whose large nerve-trunks have been divided. An action of the ganglionic apparatus in the walls of the vessels he regards as improbable, and equally so the influence of the heat-rigidity, which at the most, perhaps, has some action on the larger vessels. The principal cause of the dilatation Falk rather looks for in the lessening of the elasticity of the vessels and the adjacent tissue caused by the high temperature. (It is well known that dilatation and the other phenomena of inflammation occur after section of the nerve-trunks and from other sources of irritation besides heat.)

The increased loss of temperature is, however, not alone the cause of death from burns; death can be postponed but not avoided by a checking of the loss of heat, similarly as, according to Valentin, when varnish is applied it can be thus put off but not evaded. Artificial respiration also, in connection with the application of heat, which Walther found useful in frozen frogs (*Centralblatt*, 1866-7), has not the same result after burns. The dilatation of the vessels and the depression of the blood-pressure result in a weakening of the heart, and this, in connection with the loss of temperature, is the cause of death. As to treatment, therefore, exciting measures, and such means as wrapping in cotton wadding, and warm baths, in order to act against the cooling of the body or to counteract the dilatation of the vessels from which it results, are to be recommended. In the latter respect, Falk, from some not entirely decisive experiments, advises the experimental employment of ergotin.

The inflammations of internal organs frequently found in the bodies of persons burned, especially of the lungs and kidneys, but also of the serous membranes, Falk attributes to

the alteration of the blood produced by the burning, of which especially the destruction of the blood-corpuscles is a known result: the deeper the burn, the more extensively are the blood-corpuscles destroyed, and therefore in just such cases the inflammations in question are met with. Such cases present many analogies to those of poisoning by carbonic oxide, and, as in the latter cases, so in the former, transfusion is to be tried. The ulcerations of the stomach and of the duodenum, not unfrequently met with after burning, are to be attributed simply to the local stoppage of the circulation caused by the paralysis of the heart's action.

MICROSCOPIC EXAMINATION OF THE FRESH DEJECTA OF CHOLERA PATIENTS.—In the year 1866 (*St. Petersburg Medical Journal*, 1871), Klob and Jome, and soon after Hallier, found in the dejecta of cholera patients a number of microscopic fungi, and thought that they had discovered therein the cause of that disease. But these investigations were entirely confined to excrement which had stood for several hours; and, as various parasitic animals entirely foreign to the intestines might have mingled with it, or have developed or increased through the influence of the light and air, Dr. Loesch regarded it worth while to make a renewed examination of cholera dejecta, for which the recent epidemic of cholera in St. Petersburg gave him ample material. For his first examination the author made use of the dejecta of a patient admitted to the clinic in the asphyxia period of fully-developed cholera: vomiting, with diarrhoea, pains in the bowels, cramps in the upper and lower intestines, pulse hardly perceptible, face, hands, and feet cold to the touch and bluish. The dejections were fluid, of a dirty-white color, almost entirely odorless. On standing there formed in them two layers, an upper, entirely fluid, troubled, like milk with a large proportion of water; and a lower, composed of whitish, semi-transparent flocculi and finely granular masses.

The microscopic examination occurred at the latest from two to three minutes after the evacuation, and resulted as follows:

1st. A large number of oval and short corpuscles of from 0.006 to 0.008 mm., on the rapid and irregular agitation of which were plainly visible corpuscles with threadlike continuations, excretions, or tails, which exceeded by three or four times the length of the body corpuscle, and which kept up a continuous motion, in which an end was recognizable, while the opposite side of the corpuscles appeared slightly elongated and rounded off. This end, however, was not recognized with certainty, as the corpuscles, composed of a somewhat transparent protoplasm, possessed no sharply-defined contours, and from the constant movement took on now a round, now an oval, or even an elongated shape. In the majority of these bodies Loesch observed a moderately large, round, sharply-defined nucleus; no enveloping membrane or aperture was perceptible. These corpuscles were on further investigation decided to be *Cercomonas intestinalis*, or monads of a similar form. Their number was very large; at a magnifying power of 600 diameters from fifteen to twenty were counted within the field. In a small drop, of the size of a pin's head, several hundred could be perceived, so that their number, in view of the consequent examinations, might be estimated by the million. The same dejecta were again examined two hours later. No motion was perceptible in any of the numerous previously observed monads, and the monads themselves were not distinguishable as such; the tails had entirely disappeared; the corpuscles themselves appeared shapeless or three-cornered and cylindrical; only the nucleus was still perceptible; that appeared enlarged and like a cell undergoing fatty transformation. With a very strong magnifying power they were recognized as encysted monads.

2d. The minutest of the varieties of monads, although in far smaller numbers than the above-named: *Monas crepusculum*, etc., various vibriones, principally *Vibriona lineola* and *Vibriona nudula*.

3d. A large number of vegetable parasites in the most varied stages of development. Micrococcus, partly in the form of barely perceptible corpuscles, wandering to and fro, and some motionless, partly in the form of corpuscles with defined contours and bright contents. The latter were either disseminated singly or in groups (the colonies of Hallier). Further, wreath-

like *Mycothricis* of various lengths, composed of three and four and also of forty and fifty joints. The single joints were round, oval, and also cylindrical with rounded ends. Cryptococcus and oidium were rare. More numerously occurred also large round cells (0.01 to 0.014 mm.), which presented a double sharply-defined contour, with contents of a whitish-yellow color, and at the period of separation presented an hour-glass shape with a longer or shorter investment.

Remains of food, fat, and detritus were seen in small quantities only, while cylindrical epithelium, pus, mucus, or blood-corpuscles were nowhere to be found. In order now to decide further to which order of fungi the micrococcus, mycothrix, etc. found in the dejecta belong, Dr. Loesch undertook, after the manner of Hallier, three cultivations, and sowed for this purpose minute portions of excrement mingled with thick starch-paste and a little tartrate of ammonia. These formed *Penicillium crustaceum* and *Mucor mucedo*, together with fungi which are most common in nature, and which form by cultivation in normal excrement, and which also germinate in starch-paste when the latter is left to itself.

Subsequent examinations, which Loesch repeatedly undertook, produced precisely the same results. That Hallier, Klob, and Jome failed to find in the dejecta examined by them the earlier-described parasites which had been observed already in the cholera epidemic of 1863 and 1864, Dr. Loesch ascribes to the fact that those dejecta were no longer fresh, i.e. were not in the same condition, and that the monads had already expired or had become encysted, and were, therefore, from their changed form no longer recognizable. What rôle these animal and vegetable parasites play in the process of cholera it is difficult at present to determine. The large numbers of the parasites here discovered would indeed lead to the presumption that they have a powerfully irritating effect upon the mucous membrane, and produce an exceedingly rapid change in the intestinal canal, and thus may bring about the entire cholera process. It deserves, however, to be remembered here that these parasites are to be met with also in the dejecta of healthy persons or of those suffering with ordinary catarrhs, and hence, perhaps, are only an accidental and not an essential condition of cholera dejecta, and only develop in large quantities because the conditions for their multiplication are extremely favorable during that disease. To the solution of this question Loesch proposes to devote further experiments.

THE COMPARATIVE INFLUENCE OF MARRIAGE AND CELIBACY.—M. Bertillon, in a note to the Académie de Médecine (*L'Union Médicale*, November 16, 1871), shows that husbands have a better chance of life than either celibatists or widowers, for he has found that between the ages of 25 and 30 years one thousand husbands will furnish about six deaths annually, while the same number of single men and widowers will furnish respectively ten and twenty-two. Between the ages of 30 and 35 years the proportions are seven per one thousand for husbands, eleven and a half for single men, and nineteen for widowers. Between 35 and 40 the proportions are respectively seven, thirteen, and seventeen. It is necessary, M. Bertillon thinks, to attribute these results to marriage; and to the objection sometimes made, that those who marry are generally in good health and in easy circumstances, he answers by referring to the large mortality among widowers. Marriage at a very early age, nevertheless, gives rise to a large proportion of deaths among husbands. The mortality between the ages of 18 and 35 years among married women is less than among single women, but the difference is less than in the case of men, because women are at this time exposed to all the dangers of parturition; but, by a sort of compensation, the mortality among widows is less than among widowers or single women of the same age. He finds from a calculation of probabilities that people who marry between the ages of 20 and 25 years have about forty years of life before them, while those who remain single have about thirty-five years to live. Criminals are more frequently single than married men, and there is a greater tendency to suicide and to mental alienation among the former than among the latter.

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EDITORIAL.

THE ANNUAL REPORT OF THE SURGEON-GENERAL U. S. ARMY.

THE report of Gen. Barnes to the Secretary of War contains, as usual, much valuable information, not merely of a professional, but also of a general character. From it we learn that the entire expense of the Medical Department for the year ending June 30, 1871, was \$297,477.08.

The average mean strength of the army during the fiscal year was 29,365 *white* and 2608 *colored* troops. Among the white troops, the total number of cases of all kinds reported as taken on the sick-list was 63,507, being at the rate of 2163 per 1000 of mean strength. Of the whole number taken on sick report, 54,710 were for disease alone, and 8797 for wounds, accidents, and injuries of all kinds. The average number constantly on sick report during the year was 1480; of these, 1190 were under treatment for disease, and 290 for wounds, accidents, and injuries. The total mortality-rate is greater than that for the previous year, the chief increase occurring in the proportion of deaths from disease. The proportion of deaths from all causes to cases treated was 1 to 122. The total number of deaths reported was 519, or 17 per 1000 of mean strength. Of these, 363 died of disease, and 156 of wounds, accidents, and injuries. 1091 white soldiers are reported to have been discharged on "surgeon's certificate of disability," being at the rate of 37 per 1000 of mean strength.

The reports for the *colored* troops give the following figures, which do not include the white officers. The total number of cases of all kinds reported was 3551, or 1362 per 1000 of mean strength. Of these, 2964 were cases of disease, and 587 were wounds, accidents, and injuries. The average number constantly on sick report was 104, or 40 per 1000 of mean strength, of whom 74 were under treatment for disease, and 30 for wounds, accidents, and injuries. The number of deaths from all causes reported was 49, or 19 per 1000 of mean strength. Of these, 28 died of disease, and 21 of wounds, accidents, and injuries. The proportion of deaths from all causes to cases treated was 1 to 72. The number of discharged on "surgeon's certificate of disability" was 71, being at the rate of 27 per 1000 of mean strength.

There were entered on the registers the histories of

5210 surgical cases of the late war, making a total of 235,398 now recorded; also additional information respecting 9661 cases already recorded; and abstracts of 8947 cases which were not placed in the permanent registers were prepared for revision.

The Army Medical Museum continues to increase in the number and variety of specimens and its consequent usefulness. The number of specimens added during the year was 1516,—a present total of 15,018. The number of visitors during the year was over 15,000.

Part I. of the Medical and Surgical History of the War is near completion, and will be laid before Congress during the present session, when it is hoped a sufficient appropriation will be made to continue the publication of the remaining parts. Circular No. 4, a report upon barracks and hospitals, compiled by Assistant-Surgeon J. S. Billings, U.S.A., Circular No. 3, 1870, approved plans and specifications for post-hospitals,—also a revised edition of the same (Circular No. 2, 1871),—have been published during the year; and the Standard Supply Table of the Medical Department of the Army (Circular No. 1, 1871) has been carefully revised and published, with a view to more rigid responsibility and greater efficiency.

During the past year one surgeon and one assistant-surgeon have died, one assistant-surgeon has been retired, and one assistant-surgeon cashiered. There are at present fifty-four vacancies in the corps,—viz.: chief medical purveyor, one assistant medical purveyor, three surgeons, and forty-nine assistant surgeons. In concluding his report, Gen. Barnes says, "If the restrictions as to promotions and appointments in the medical corps were removed at once, it would require several years through the prescribed modes of annual examination to restore it to the standard number allowed by existing laws; and the reduction of that number by stoppage of promotion and appointments has proved to be prejudicial to the interests of the service, both in a sanitary and economical view."

WE regret to have to announce the retirement of Dr. Tyson from the position of Assistant Editor of this journal,—a step which he has thought necessary in consequence of the demands made upon his time by professional engagements. He will continue from time to time to furnish contributions to our pages.

LEADING ARTICLES.

WHITHER ARE WE DRIFTING?

SOME little time since, chance or an evil star of destiny led us into the rooms of the Pennsylvania Society for Prevention of Cruelty to Animals, and we found ourselves confronted by a crowd of ladies, eagerly desiring each to have her speak on the horrid cruelty of vivisections.

"Dr. — says there never was anything learned from

vivisections," said one. "Yes, and if anything ever was learned, Brown-Séquard says all is now known that is worth knowing," echoed a second. "Magendie on his death-bed regretted it bitterly, and confessed it to be the sin which had ruined his soul," chimed in a third. "How can you do it?" And mild eyes looked so reproachfully that we really did begin to think ourselves a sort of a monster, and certainly appreciated most fully the feelings of their possessor.

It may seem strange, when the poor are dying in our streets for very cold and poverty, when the sick are languishing in half-furnished hospitals or perishing in the by-ways and alleys, calling down God's curse upon the city that leaves them so, when the pestilence is deepening the gloom in many a stricken household, when in almshouse and alley the patient sufferers are longing for human sympathy and some one to break to them the bread of life,—when these things are so, it may seem strange that women of refinement and culture, clad in their fine raiment and rejoicing in their happy homes, should pass by their own suffering fellow-beings and devote themselves with all their earnestness to brutes, weighing the life and suffering of man against the life and suffering of the brute, and casting in their strength and powers with the latter. But when a woman has once become a professional protector of the dog,—with her whole-heartedness, her mine of tender feeling, her inborn tendency to see only one side of a question,—it is but natural that she should get most narrow and distorted views, ending in that bigoted ignorance which hesitates not—knowing no better—to advance with a ludicrous persistence the most transparent falsities as proven facts.

Such things any one may feel disposed to pardon in an elegant lady; but what shall we say when a member of our profession, driven by some nightmare chimera of his imagination, oppressed by a morbid sensibility, puts on record such sentiments as are contained in Dr. H. J. Bigelow's pamphlet on Medical Education in America? As these paragraphs have been in all our daily papers, and as space is precious, it is unnecessary here to quote them. We know it will be said it is of very little importance what a man who writes such sentences thinks; and so we acknowledge it to be. Yet office throws a halo around the most contemptible. In America, public opinion must finally uphold or crush out everything brought to its bar. To-day the practice of vivisection is at the bar of public opinion; and far and wide over our land, to the sad detriment of truth, the dictum of a professor in Harvard College is being quoted by hundreds who never before heard of the Boston surgeon. The false poisoned arrow which he has shot has far outstripped all the truth a lifetime has sped on its way.

Much that our professor writes is so childish as to be beneath criticism. Witness the proposition that when a vivisector is experimenting he should always cut one-eighth the distance into his own flesh that he does into that of his victim. It is possible that the professor, when he wrote this, thought it fine, ingenious, and no doubt

the F. B. of the Pennsylvania Society for Prevention of Cruelty to Animals thinks it so; but, we say, whither are we drifting, when a leader of the profession can stand up and speak such nonsense before one of its chief societies?

But we have a graver charge than that of nonsense to make against this writing; much of it is false,—and, coming from one so high, it must be *knowingly* false. It is a direct attempt to hide the truth: on the one hand he draws a picture of brute suffering wrought up to a pitch far above what it is in nature, heightened with sketches drawn from the veterinary school of Alfort, and on the other he makes the blank assertion that no good has of late years come out of vivisection. Must we not repeat *knowingly* false? for is it possible that the professor does not know that Alfort was a veterinary school, and that it was chiefly, or at least largely, through the efforts of the medical profession—the vivisectors—that it was broken up? We say *knowingly* false; for is it possible that a Harvard professor has not heard of vaso-motor nerves, of spinal cord, or of modern nervous physiology, which rests almost exclusively on vivisection? We say *knowingly* false; for is it conceivable that he should lecture on tetanus and not have heard of Calabar bean or chloral, whose action and powers were first learned by means of vivisection? Once more we say *knowingly* false; for is it possible that to his ears not yet have come sounds of the great truths about inflammation and tuberculosis and other general nutritive disturbances which are being wrought out through vivisection?

It is needless for us to say more on these paragraphs of Dr. Bigelow; their own condemnation is stamped so deep and sharp in their very fibre that every professional man will at once perceive it; but to let them go unchallenged, to let the public think that they are true, or represent the opinions of a large body of the American profession, were an outrage to that profession, and especially to the few who, without hope of direct reward, spend hours of toil in search, by the repulsive method of vivisection, for precious truth and human boon.

If such words have astonished and stirred us, much more deeply and indignantly have we been moved for the honor and fair name of our American profession by other paragraphs in this most remarkable pamphlet.

The Roman philosopher, when sore sickness, dull business, or a scolding wife made life seem weariness, threw off the load, and the world praised his courage. But times have changed, and murder and suicide have been rendered unfashionable by Christianity. Napoleon, in Egypt, shot down his Arab prisoners by thousands, justifying himself by a stern necessity; but the world execrated him.

Some time since, a leading practitioner of this city—a plain Quaker gentleman, marked by his peculiar garb—was horrified by being asked whether it was true that when a baby was suffering, and he thought that it would not recover, he put it to death. If the mere suspicion sent a shudder through him, what must be his astonish-

ment when a learned professor states that such or very similar action was his habitual practice? We will not put Dr. Bigelow in a false light, and therefore quote the passage in full from page 35 of his pamphlet:

"In a surgical practice of twenty-five years, I have never intentionally given a patient, unless by his own choice, any unnarcotized pain, *nor have I allowed a patient to die a death of pain, when opium would lull him into his long sleep. I share the responsibility of this with the surgeon who walked about the battle-field distributing morphia to the hopelessly wounded, and with the soldier of Ambroise Paré, who did more.* It has been my lot to see a friend, at the end of a painful and hopeless malady, to whom, when the hour of death seemed to be near at hand, I had given the morphine largely, twice awoken with a week's new life, due to eighteen or twenty-four hours' deep sleep and continued exemption from pain."

If English mean anything, these sentences certainly mean that when, in his finite judgment, death is at hand, Dr. Bigelow, driven by the same morbid sensibility that has so warped and distorted his vision in regard to vivisection, hesitates not to take into his feeble hand the issues of life and death, which are said to belong to the Almighty. The inference from the last sentence, taken with what goes before, is inevitable,—that his friend did not wake up from the third poisonous draught.

In Philadelphia we have not as yet progressed so far as to lose respect for a certain book which says, most emphatically, *Thou shalt commit no murder.* And we had thought that even in self-complacent Boston, the centre of progress, this old-fashioned maxim still held sway in the profession. But with sorrow and shamefacedness we hang our heads; nay, rather, with determined earnestness let us raise our voices in indignant protest at this last and vilest prostitution of our sacred calling. Time was when physicians were earnest men, full of sympathy and true zeal for the welfare of their kind; but, alas! we seem to be drifting away from the ancient moorings; the profession is fast becoming a trade; but infinitely more welcome were the simple commercial basis than this maudlin sensibility which would utterly pervert the truth and hesitate not to trifle with human life.

CORRESPONDENCE.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

SIR,—Dr. Stephen Smith, in replying (on p. 94 of your issue of December 1) to criticisms by Dr. Ashhurst (*American Journal of the Medical Sciences*, October, 1871, p. 451) on an article "On Amputations at the Ankle-Joint in Military Surgery" (Surgical Memoirs of the War of the Rebellion, edited by Prof. Frank Hastings Hamilton, A.B., A.M., M.D., etc.), is pleased to digress from ankle-joint operations to those at the hip, and to accuse me of "vitiating" the conclusions derivable from the statistics of that operation, in admitting the case of S. Cooper and rejecting that ascribed to Drs. Richards and Claggett. The relevancy of this criticism in a discussion on ankle-joint opera-

tions is obscure. Of its fairness, those who have consulted Circular No. 7, S.G.O., 1867, can judge. The tables therein were of cases of amputation for gunshot injury, and hence, if authenticated, the case ascribed to Drs. Claggett and Richards could not have a place in them. But Samuel Cooper, after describing the exarticulation at the hip for gunshot injury, in which he assisted Cole, in Holland, in 1814, proceeds to say (I cite from the quotation from the "Surgical Dictionary" in Dr. Smith's letter, congratulating myself on the opportunity of consulting the extended extract from that rare work), writing of a soldier with his femur shattered in the upper portion by grape, "*I ventured to perform the same operation.*" Surgical statisticians would hardly have acquitted me had I omitted this case from a table designed to show the mortality of amputations at the hip after gunshot wounds, although the unfortunate patient died under the operation and before its completion. Had the Cooper case been excluded, the difference in the death-rate would have been six-tenths of one per cent. I hope that Dr. Smith may never be farther out of the way in his statistical inquiries.

Very respectfully,

GEORGE A. OTIS,

Assistant-Surgeon, U.S.A.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

SIR,—I find in the last issue of the *Times* (vol. ii. No. 30), under the head of Miscellany, a table to show the "Singular Uniformity of the Mortality-Rate, illustrated by the Statistics of Cases of Smallpox in Philadelphia from 1860 to 1870 inclusive." The figures are said to have been taken from the records of the Board of Health, which is, no doubt, true so far as it goes; but when the means are known by which these figures were arrived at, the cause of the singular uniformity will be apparent enough.

Through the courtesy of Mr. Addicks, Health Officer, I have had placed in my hands a copy of his report to the Board of Health, containing the table alluded to; and I there find that in presenting these figures he says, the deaths from smallpox in Philadelphia during the period from 1860 to 1870 being known, the total number of cases unknown, he has simply estimated the number of cases that have occurred during this period, by taking as a basis the ratio of deaths to the known number of cases reported during the present year (1871) up to October 14, which amounts to about 1 to 6.6.

In this connection I might add that since the report referred to was made, the death-rate has undergone a material change, for up to December 23, 1871, the whole number of cases reported amounts to 6582, out of which there have been 1428 deaths, making 1 to 4.6. This, of course, includes all cases reported, vaccinated and unvaccinated.

Hoping you will give this communication room in your journal,

I remain, very respectfully,

W. M. WELCH, M.D.

1230 SPRING GARDEN STREET, December 21, 1871.

PARALYSIS OF OCULAR MUSCLES TREATED WITH CALABAR BEAN.—Mr. T. Wharton Jones reports in the December number of *The Practitioner* two cases of paralysis of ocular muscles successfully treated by dropping a solution of the extract of Calabar bean into the eye.

REVIEWS AND BOOK NOTICES.

NEURALGIA AND THE DISEASES THAT RESEMBLE IT. By FRANCIS E. ANSTIE, M.D. (Lond.), F.R.C.P., Lecturer on Medicine in Westminster Hospital School. 8vo, pp. 296. London and New York, Macmillan & Co., 1871.

In the present work Dr. Anstie elaborates certain views on the subject of neuralgia, which he has already briefly given to the profession in an excellent article in Reynolds' *System of Medicine*, and which he has had reason to believe were imperfectly comprehended. He embraces the opportunity to vindicate for neuralgia that distinct and independent position which he is convinced it really holds, and to prove that it is not a mere offshoot of the gouty or rheumatic diathesis, still less a mere chance symptom of a score of different and incongruous diseases. The volume opens with a few remarks "On Pain in General." Pain, Dr. Anstie holds, involves a lowering of the ordinary sensory function, and is due to a perturbation of nerve-force, originating in dynamic disturbance either within or without the nervous system; the susceptibility to this perturbation being great in proportion to the physical imperfection of the nervous tissue, until this imperfection reaches to the extent of cutting off nervous communications (paralysis). There can be very little doubt that this is the true view of the pathological import of pain.

The most important chapter in the book is, however, that which treats of the etiology and pathology of neuralgia; and in the following notice we shall call our readers' attention principally to those views on these subjects which have struck us as original and ingenious. In the first place, Dr. Anstie removes neuralgia from the list of purely functional diseases, and, placing the seat of the morbid process in the posterior roots of the spinal nerves, or in the gray matter with which they are connected, he is inclined to believe that this consists in an atrophic change. This atrophy may be preceded by inflammation, but not necessarily, as it may be produced by long-continued alteration in the nutrition of the part caused by peripheral irritation of the nerves. The amount of positive evidence in favor of this view, it must be confessed, is very small; there exists, however, at least one observation which seems to confirm it. In a case reported by Romberg, a man had suffered for several years from the most violent and intractable epileptiform trigeminal neuralgia, complicated with interesting trophic changes of the tissues. Post-mortem examination showed that the pressure of an internal aneurism had almost entirely destroyed the Casserian ganglion of the painful nerve, that the trunk and posterior root of the nerve were in a state of advanced atrophic softening, and that the atrophic process had extended in a less degree to the nerve of the opposite side. Moreover, in locomotor ataxy, in which the main anatomical change is a progressive atrophy of the posterior columns, which usually falls with peculiar severity on the *posterior nerve-roots* or on the parts of the gray matter immediately adjoining them, *neuralgia* may be said to be a *constant and most characteristic phenomenon*. It has been experimentally demonstrated by Tresler, a pupil of Leyden's, that irritation may be conveyed to the spinal cord, and give rise there to inflammatory products, without the nerve which has served as the medium of communication taking part in the inflammatory process. The amount of negative evidence in favor of Dr. Anstie's view is, however, greater; for in the immense majority of instances in which the painful nerves have been examined at the apparent site of pain, nothing has been discovered to lead us to connect neuralgia definitely with any sort of change. It is true neuritis has been occasionally found, but it is as often absent, and has, on the other hand, been repeatedly detected in nerves that have been wholly free from neuralgia. It is impossible to account for the variety and complexity of the phenomena presented in cases of neuralgia, except by the supposition that there is in every case a central change, which is the one most important factor in the production both of the pain and of the secondary phenomena. Among the most important of the secondary phenomena are vaso-motor paralysis,—or vaso-motor spasm; an increase, diminution, or alteration in the secretions of glands supplied

by fibres bound up either in the same branch, or in another branch of the same nerve, or in a different nerve, with which the painful nerve is connected only through the centre, or, possibly, only through a plexus; paralysis of parts supplied by the painful or a different nerve, connected with it only through the centre; loss of common or special sensation in nerve-fibres that run either with the same branch, or with another branch of the same nerve; and, lastly, trophic changes either in the direction of simple atrophy or of subacute inflammation, with proliferation of lowly-vitalized tissues (*e.g.* connective) in the parts which are supplied with sensation by the painful branches or by other branches of the same nerve. It seems hardly possible that changes so numerous and various as these could be produced by any alteration in the peripheral extremities of the nerves, and much more likely that they all have a central origin. While it can scarcely be asserted that Dr. Anstie has proved that the posterior nerve-roots are the parts primarily and principally affected in neuralgia, he has certainly brought forward a great deal of evidence in favor of this view. To the objection that might be made that neuralgia can scarcely be dependent on any changes analogous to those which occur in ataxy, because, while the former disease is in many cases, under proper treatment, curable, the latter is never so, he replies that the changes in neuralgia need not be permanent. Are we, he says, to suppose that the posterior nerve-roots alone of all the tissues and organs in the body are incapable of minute and partial changes in the direction of molecular death, which may be perfectly recovered from in weeks, months, or even days?

Neuralgia, if we understand Dr. Anstie's view, originates, as a general rule, in some peripheral irritation of a nerve, which, being conveyed to the spinal or cerebral centre of the nerve, gives rise to certain alterations which find their expression in pain.

An exciting cause, however, which is sufficient in one individual to give rise to neuralgia, will produce no effect upon another, showing that there exists in some subjects a marked predisposition to the disease; and this, like all other predispositions, may be inherited or acquired,—much more frequently than is generally supposed the former. The occasional occurrence of neuralgia in nerves connected with the irritated nerves only through the nervous centres, or at particular epochs of life, without any special exciting cause, shows that "neuralgics are, save in exceptional instances, *persons with congenitally weak spots in the nervous centres*, which break down into degeneration, temporary or permanent, under the strains imposed by one or other of the physiological crises of the organism, or the special physical or psychical circumstances which surround the patient's life."

Our notice has already been so extended that we have left ourselves little space to speak of Dr. Anstie's treatment of neuralgia, and must content ourselves with saying that he now recommends the use of the constant galvanic current, having had abundant opportunities to satisfy himself of its usefulness since he wrote his article in Reynolds' *System of Medicine*, in which, it will be recollected, he speaks somewhat cautiously in regard to it. We regret that we cannot do more than refer to his remarks on the subject of angina pectoris, which he believes to be essentially a neuralgia of the heart.

Dr. Anstie describes among the diseases that resemble neuralgia a peculiar condition dependent upon chronic alcoholism. The pains which attend this affection resemble those due to neuralgia in many but not in all respects. Thus, while paroxysmal, and aggravated by bodily and mental fatigue, they never follow the course of a recognizable single nerve, but generally encircle the limbs near the joints, rather than run longitudinally down the extremities, are nearly always present in more than one limb, and usually in both halves of the body at the same time, and are far less promptly and effectually relieved by hypodermic injections of morphia than are the true neuralgias. There are also certain moral characteristics of the patient that often tell a significant tale. The drinker, especially if a woman,—and women suffer from these pains more frequently than men,—is slightly voluble, and full of plausible theories to account for this and other phenomena.

We regard the book as the best treatise on the subject in

the English language, and most cordially recommend it to the profession.

NOTE.—Since this notice was written, we have received an American reprint of this work, issued by D. Appleton & Co., New York.

PRACTICAL THERAPEUTICS. By EDWARD JOHN WARING, M.D. Second American from the Third London Edition. Philadelphia, Lindsay & Blakiston.

This American reprint of an English work is another instance of the disregard of the rights of authors that has built up the fortunes of so many American publishers,—a wrong which is a disgrace not so much to those who profit by it as to the government and the public opinion which allows it. The book itself has much that commends it, but at the same time is wanting in many things. It is in no sense a scientific work, and, in fact, its author would probably not claim for it any such position, but would state that he had simply attempted a compilation of all known "practical" facts in regard to the use of drugs, caring little for how or why medicines act, wishing to know only that they did so.

Dr. Waring's book is then, we take it, offered as a condensed statement of what are known or asserted by persons supposed to be competent to be the results of the exhibition of drugs,—a record of published facts gathered from books and journals; and the question for the reviewer is, How widely, thoroughly, and judiciously has the author garnered?

With English literature Dr. Waring appears to be most minutely acquainted; but the English medical literature is only a small part of the world's treasure, and in other fields than those immediately around him Dr. Waring has evidently been chary of wandering. Thus, in a list of some fifty-six works given in the front of the book as being afterwards cited, there is not a single German book, and but one French, and that was published in 1855. When we turn from the list of general works to the reference in the texts to journals and monographs, we find, in twenty pages taken at random, fifty-four English references, four French, no German, and no American.

It takes no perambulating Yankee phrenologist to discover that in Dr. Waring there is a truly English hyperplasia of the bump of veneration. Else how is it, in the sparing use he makes of foreign books, he holds so affectionately to editions venerable for age, forgetting that, whatever may be true of wine, works on therapeutics musty and cobwebbed with the dust of decades are not the compeers of their brothers fresh from the ordeal of the printing-press?

It is, no doubt, this most worthy and respectable regard for what is ancient and venerable which betrays our author into stating that veratria has been detected in *veratrum viride*, whereas modern editions of almost any of the American works on therapeutics would inform him that it was long since proved that *veratrum viride* contains no veratria.

We would not by any means condemn the book. In many respects it is an admirable work, full of good, terse, simple English,—full of facts crowded and jammed together almost as closely as Smyrna figs in their box,—redolent of the midnight oil of the study; yet it fails, after all, in the marks of the true, faithful student, eager for thoughts and knowledge, locked though they be in the strong box of an unknown and seemingly barbarous language.

Evidently our author belongs to the too large class of English and, to a less extent, American writers who were educated before it was the fashion to study the "barbarous German," and who have never overcome this defect in their early training. Truly, brother craftsman, thou dost go forth to thy work with but half thy outfit. Remember that thy workshop is a battle-field,—thy duty the conflict which hath for its wager human hopes and human fears, life and death; and if thou wouldst quit thyself manfully and push forward the battle, looking to the time when Death shall be driven back to the territory his own by birthright, thou must see to it that thy arms are well furnished, picked from the world's universal armory. More than this, if thou aspirest to a higher rank than that of him who wages the hand-to-hand conflict in the chamber of agony, how much greater is thy responsibility that no narrow view of thine weakens and hurts those thou wouldst lead!

THE TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION. Vol. XXII. 8vo, pp. 393. Philadelphia, Collins, Printer, 1871.

Judging from the contents of the volume before us, we should say that the proceedings of the last meeting of the American Medical Association must have been singularly devoid of scientific interest. The reports of the various committees are very commonplace, if we except that of Dr. F. W. Hatch on Epidemics and Climatology of California, which is written with great care, and will be found to contain much valuable information in regard to the prevalence of consumption in that State. When speaking of California as a health-resort for the consumptive, Dr. Hatch says that "at a stage of disease when relief may be with some reason hoped for, we regard our mountain-ranges, in the summer season especially, as among the most favorable of any to be found within the limits of the States, and as possessing advantages which commend themselves to the invalid as affording in suitable cases a healthful and safe resort." The few original communications are of no merit, excepting one contributed by Prof. Eve, and entitled "A Synopsis and Analysis of One Hundred Cases of Lithotomy and Lithotripsy," which is valuable simply because it embodies the experience of so distinguished a surgeon as its author.

One prize was awarded to Dr. Edward R. Taylor, of California, for an essay "On the Chemical Constitution of the Bile," and the other to Dr. Benjamin Howard, of New York, for an essay entitled "The Direct Method of Artificial Respiration for the Treatment of Persons apparently Dead from Suffocation by Drowning or from other Causes."

Dr. Taylor cannot claim any originality for himself, for his essay is simply a résumé of all that is known of the subject of which it treats. Although it is well written, and valuable in its way, we cannot help regretting that it was not founded in part, at least, upon original investigation.

Dr. Howard claims for the direct method for performing artificial respiration several advantages over any other method hitherto proposed. In the first place, it is more effective; in the second, it is more easily understood, and more readily performed. We will give the description of the process in Dr. H.'s own words: "Turn the patient on his face, a large bundle of tightly-rolled clothing being placed beneath his stomach, and press heavily over it upon the spine for half a minute, or so long as fluids flow freely from the mouth. Place the patient on his back, the roll of clothing being so placed beneath it as to raise the pit of the stomach above the level of any other part of the body. If there be another person present, let him with a piece of dry cloth hold the tip of the tongue out of one corner of the mouth, and with the other hand grasp both wrists, and keep the arms forcibly stretched back above the head. Kneel beside or astride the patient's hips, and, with the balls of the thumbs resting on either side the pit of the stomach, let the fingers fall into the grooves between the short ribs, so as to afford the best grasp of the waist. Now, using your knees as a pivot, throw all your weight forward upon your hands, and at the same time squeeze the waist between them, as if you wished to force everything in the chest upwards out of the mouth; deepen the pressure while you can count, slowly, one—two—three; and suddenly let go with a final push, which springs you back to your first kneeling position. Remain erect upon your knees while you can count one—two; then repeat the same motions as before, at a rate gradually increasing from four or five to fifteen times a minute, and continue thus this bellows movement with the same regularity as is observable in the natural motions of breathing which you are imitating." This is to be continued for from one to two hours, or until the patient breathes. Although we think Dr. Howard has somewhat overstated the disadvantages of Silvester's method, it does seem to us that his method will be found effective under circumstances which would render all others impracticable.

CANCER: ITS CLASSIFICATION, AND REMEDIES. By J. W. BRIGHT, M.D. Published by S. W. Butler, Philadelphia, 1871. 8vo, pp. 187.

This work abounds in unnecessary repetitions, its style often lacks perspicuity, and the statements are frequently conflicting. Thus, in the first chapter, cancer is described as a blood

disease, "an exudation of the peculiar blastema" from the blood-vessels, hence "the blood itself is in an abnormal state." In another chapter we are told that cancer-cells "are always local in their first appearance; and they never become constitutional except by absorption."

Throughout the book the author speaks of, and attaches a great diagnostic value to, the typical cancer-cell; even when obtained from the discharge of open sores, the microscope will often clear up all doubts. This dogma of the typical cancer-cell is considered as no longer tenable by modern pathologists, who now attach fully as much importance to the alveolar arrangement of the stroma of connective tissue as to the epithelial character of the cells aggregated in the alveoli. Dr. Bright, however, warns us against placing a too implicit reliance on the microscope; and he evidently does not use it as his only diagnostic medium, since he speaks of a characteristic cancer-smell, as well as of the characteristic cancer-cell.

The book is a compilation of the views of numerous authorities regarding the nature and treatment of cancer; to these are added the author's own experience, extending over a period of fifty years.

During the first half of this period, when the knife was resorted to in the treatment of cancer, not ten per cent. of his cases were cured. For the last twenty years, however, he has not lost ten per cent. of all his cases, and he has cured many who have remained well for years. This is effected by skillfully "combining ordinary remedies so as to triple and quadruple their powers." These potential and famous combinations are four in number; but, as they all contain chloride of zinc, and the last three are but different modifications of the first, we shall content ourselves with "No. 1: Solid extract of podophyllum (the root), one part; pure chloride of zinc, three parts; starch, one-fourth part; red saunders, one-fourth part; water sufficient to form a thick paste."

THE DRUGGIST'S GENERAL RECEIPT-BOOK, comprising a Copious Veterinary Formulary, with Numerous Receipts in Patent and Proprietary Medicines, Druggists' Nostrums, Perfumery and Cosmetics, Beverages, Condiments, Scientific Processes, and an Appendix of Useful Tables. By HENRY BEASLEY, Author of the "Book of Prescriptions," etc. Seventh American from the last London Edition. Philadelphia, Lindsay & Blakiston, 1871. 8vo, pp. 497.

Though from its title seemingly intended especially for the druggist, this book is quite as well adapted to the wants of the house- and horse-keeper generally, being filled with valuable receipts of every variety.

The Veterinary Pharmacopœia, or, more properly, formulary, is remarkably full, as is the portion devoted to miscellaneous preparations, from which last the good-wife may draw much useful information to the furthering of domestic comfort and economy.

Well and handsomely dressed, and furnished with a copious index, the work reflects credit upon author and publishers.

THE PHYSICIAN'S DOSE- AND SYMPTOM-BOOK, containing the Doses and Uses of all the Principal Articles of the Materia Medica and Official Preparations. By JOSEPH A. WYTHES, A.M., M.D., late Surgeon U. S. Vols., Author of "The Microscopist," etc. Tenth Edition. Philadelphia, Lindsay & Blakiston, 1871. 12mo, pp. 277.

This little work is already well known. To all in need of such a compendium it must prove valuable, the arrangement of the contained matter being well chosen and convenient.

BOOKS AND PAMPHLETS RECEIVED.

Anæsthesia, Hospitalism, Hermaphroditism, and a Proposal to Stamp out Smallpox and other Contagious Diseases. By Sir James Y. Simpson, Bart., M.D., D.C.L., Late Professor of Midwifery in the University of Edinburgh. Edited by Sir W. G. Simpson, Bart., B.A., etc. 8vo, pp. 560. New York, D. Appleton & Co., 1872.

A Treatise on English Punctuation; Designed for Letter-writers, Authors, Printers, and Correctors of the Press, and

for the Use of Schools and Academies. By John Wilson. Twentieth Edition. 12mo, pp. 334. New York, Woolworth, Ainsworth & Co., 1871.

A Compendious Grammar of the Greek Language. By Alpheus Crosby, Professor Emeritus of the Greek Language and Literature in Dartmouth College. 12mo, pp. 370. New York, Woolworth, Ainsworth & Co., 1871.

Æsthetics; or, The Science of Beauty. By John Bascom, Professor in Williams College. 12mo, pp. 268. New York, Woolworth, Ainsworth & Co., 1871.

The National Composition Book. New York, Woolworth, Ainsworth & Co., 1871.

Bartholomew's Drawing-Book, No. 1, and Teacher's Guide, Companion to Drawing-Book No. 1. Woolworth, Ainsworth & Co., 1871.

(All of the above are for sale by J. B. Lippincott & Co.)

Annual Report of the Trustees and Superintendent of the State Lunatic Hospital of Pennsylvania. Harrisburg, 1871.

On Vascular Nævi, and their Treatment by the Actual Caustery. By B. F. Dawson, M.D., New York. Reprinted from *The American Journal of Obstetrics and Diseases of Women and Children*.

Mutual Relations of the Medical Profession, its Press, and the Community. By Dr. Storer, Jr. (Horatio), of Boston. Reprinted from the *Journal of the Gynecological Society of Boston*.

Transactions of the Medical Society of the State of West Virginia. Wheeling, 1871.

Moderate Houses for Moderate Means. An Argument for Cheap Trains as Essential to Independent Homes for the Working Classes, etc. By Josiah Quincy. Boston, 1871.

The Physician's Annual for 1872. A Complete Calendar for the City and Country Practitioner. Philadelphia, S. W. Butler, M.D., 1872.

GLEANINGS FROM OUR EXCHANGES.

SMALLPOX STAMPED OUT BY SULPHUROUS ACID FUMIGATIONS.—Dr. J. Hjaltekin, the chief physician of Iceland, gives in the *British Medical Journal* for Nov. 4 a very interesting account of an epidemic of smallpox which occurred in some French fishing-vessels in the harbor of Reykjavik. The sick men, twenty-two in number, were removed to a large house situated about half a mile from the town, and placed in charge of a medical student and some nurses, none of whom were allowed to have any communication with people outside. The doctor, who is a firm believer in disinfectant and antiseptic remedies, determined to try sulphurous acid, both externally and internally,—externally, in the form of fumigations, by burning refined sulphur in the sick-rooms; and internally by giving sulphurous acid mixed with pure water. "The effect," he says, "was highly encouraging; and it soon became evident that, although the patients had at first a great aversion to the fumigation, and complained of the strong and pungent sulphurous odor, they soon felt the good effects of it, and they became so eager for it that I was obliged to restrain their eagerness a little, being afraid that their lungs might suffer. At the same time they got ordinary sulphurous acid internally, mixed only with pure water, the usual dose being about a drachm, mixed with an ounce of water, and this being taken every third hour. The result of this treatment was very satisfactory, for not only did the eruptive fever and the heat diminish, but in the milder form of the disease the vesicles dried very quickly, leaving the skin covered with thin brown scales, which soon fell off. Out of twenty-two patients treated in this way I only lost one; he was brought to the hospital in a moribund state, and expired about thirty-nine hours after his arrival. Amongst the patients thus treated, seven had confluent smallpox; and of these, three were in the fourth or suppurative stage when they came into the hospital, and four were in the third stage."

There is reason to believe that the sulphurous acid had a really destructive power on the smallpox virus, as in the following instance: "A carpenter had been taken into the quarantine in order to make some new beds for the patients, and remained there among the sick for some time. When he had done his work he was let out, after having been exposed to strong sulphurous fumigations. He was then outside under strict observation during fourteen days; and when no precursory symptoms could be observed in him, he was revaccinated with complete success, and had true vaccine pits a second time, for he had been vaccinated twenty years before." It may be added that experience has shown that the Icelanders are, no less than other people, extremely liable to the smallpox contagion. A frightful epidemic occurred in the island in 1707, which killed one-fourth part, or 18,000, of the inhabitants. Dr. H. says also that the fumes of sulphur are not, as generally supposed, irritating, that they may be inhaled with advantage in various bronchial affections, and that those who are exposed to them will be found to enjoy a wonderful immunity from attacks of influenza during epidemics of that disease.

THE REMOVAL OF MORBID GROWTHS FROM THE LARYNX BY SECTION OF THE CARTILAGES.—Mr. Arthur Durham read a paper before the Royal Medical and Chirurgical Society (*Lancet*, November 25), in which he related in detail five cases, in each of which the operation had been performed in Guy's Hospital,—in three cases by himself, in one by Mr. Bryant, and in one by Mr. Colley. The result in four of these cases had been eminently satisfactory, free respiration and good voice having been regained. The remaining case was still under treatment. Appended to the communication were more or less complete reports of all the cases the author had been able to find on record. These cases were thirty-two in number, and, with the five detailed in his communication, gave a total of thirty-seven. In nineteen of these the operation might be regarded as having been completely successful, natural respiration and voice (though in some instances not normal in tone) having been restored. In seven partial success was obtained, respiration having been restored, but the voice lost or very seriously impaired. In four cases some temporary relief was obtained. In three the result might be considered negative, neither good nor harm having been done. The reports of at least two cases were incomplete. In two cases—and two cases only—death resulted. In each of these, however, the immediate cause was blood-poisoning. Metastatic abscesses were found in the lungs in one case; in the other erysipelas and gangrene occurred, and bronchopneumonia and exhaustive fever ensued and led to a fatal issue.

THE RELATIONS OF ASTHMA, ANGINA PECTORIS, AND GASTRALGIA.—Dr. Anstie calls attention in the *British Medical Journal* for November 11 to the pathological and therapeutical relations which seem to unite these three diseases, making it evident, he thinks, that they depend on neurosis of the vagus, which is of central origin, and in the large majority of cases is mainly or entirely due to inherited peculiarities of the central nervous system. The evidence in favor of this view arranges itself under five heads. 1. Inferences from the known physiological functions of the vagus. 2. Evidence of the interchangeability of asthma, angina, and gastralgia in the same individual. 3. Evidence of the pathological connection of these neuroses with neuralgia of the fifth nerve. 4. Evidence of the common dependence of asthma, angina, gastralgia, and neuralgia of the fifth on peculiar inherited neurotic tendencies. 5. Evidence from the similarity of effects produced by certain remedies on all these maladies.

THE USES OF THE UVULA.—The *American Practitioner* for October 1, 1871, quotes from *The Doctor* the statement of the views of Sir Duncan Gibb in reference to the uses of the uvula, which was communicated at the late meeting of the British Association, held at Edinburgh. "1. It acts as a sentinel to the fauces in exciting the act of deglutition when anything has to be swallowed. 2. It compresses the soft palate and holds its posterior free border firmly against the wall of the pharynx in deglutition, so that nothing can pass upward. 3. It modifies speech in the production of loud declamation and the guttural forms of language, by

lessening the pharyngo-nasal passage, when it acts as an elevator. 4. Its elevating power is increased to the most extreme degree in the highest ranges of the singing voice, and is very moderately exerted in the lower ranges. 5. Therefore, in its uses, deglutition and vocalization are the functions that are intimately associated with the uvula, and both become impaired more or less if it is destroyed, wholly removed, or seriously injured."

EXTROVERSION OF THE BLADDER.—Two cases of this deformity are recorded in the *British Medical Journal* for November 18. In one case Mr. Sydney Jones made a communication of about half an inch in extent between each ureter and the rectum, his object being to divert all the urine into the rectum. At a subsequent operation, an attempt to produce closure of the anterior orifice of the ureter was made. There was abundant evidence, before and during the second operation, of the sphincter ani being able to control the escape of the urine. On the day of the operation, as much as two ounces were passed as soon as the sphincter was relaxed by the introduction of the finger into the rectum.

In the second case, Mr. Bellamy performed the usual operation. Unfortunately, however, the superior abdominal flap sloughed away in consequence of the patient's incessant coughing from bronchitis after the operation. A second operation was performed, but the result is not stated.

BROMIDE OF CALCIUM.—Dr. Wm. A. Hammond, in a note to the *New York Medical Journal*, calls attention to the bromide of calcium, which contains a large amount of bromine (every 100 grains containing 79.5 grains of bromine), and which in consequence of its instability and of the readiness with which it parts with its bromine is especially useful in those cases in which speedy action is desirable. It has a powerful hypnotic influence, and hence is particularly beneficial in cases of delirium tremens, or the insomnia resulting from intense mental labor or excitement. In the treatment of epilepsy Dr. H. does not think it possesses any advantages over the bromide of potassium or of sodium, except in those cases in which the paroxysms are very frequent, or in cases occurring in very young infants. It does not appear to cause acne to anything like the extent of the bromides in more general use.

INSTRUMENTS FOR DISTINGUISHING LEAD FROM BONE.—The *Lancet* of Nov. 11 contains the following account of an instrument to distinguish between bone and lead: "The instrument consists of a pair of bullet forceps with blades electrically insulated from each other at the joint and connected by means of wire with a miniature pair of galvanic plates, one of the wires being coiled around the case of a compass-needle, thus constituting a small galvanometer. On the pocket instrument case to which this is attached being opened and so arranged that the needle stands parallel to the wires, the moment any metallic body is touched by the blades of the forceps, indication is given by a deflection of the needle, enabling the operator to know with certainty whether it is the proper object or a piece of bone he is touching. We may further state that this apparatus is inexpensive, and that it is contained in a common pocket case. The voltaic plates are only two inches square, and when wrapped in gutta-percha tissue their activity is preserved for weeks, and is easily renewed at any time by remoistening the woollen cloth between them with a few drops of acidulated water."

A FULLY-MATURED TÆNIA SOLIUM EXPELLED FROM A CHILD FIVE DAYS OLD.—Dr. Samuel G. Armor reports in the *New York Medical Journal* for December the case of a child in whom trismus and other nervous symptoms were found to be dependent upon the presence of tape-worm in the intestinal canal. When the child was five days old, a sixth of a grain of calomel was given to it for the relief of these symptoms, and about ten hours afterwards the child passed two segments of the parasite. Anthelmintics were then administered, which caused the expulsion of numerous other segments, with entire relief to the symptoms. Some of the segments were examined microscopically by Dr. Segur, who reported that they unquestionably were part of a tænia. Two months after the birth of her child, the mother, who did not suspect the presence of tape-worm, and who was apparently in good health, was put upon treatment for tape-worm, taking, while fasting, the emulsion of pumpkin-seed. At the

end of twenty-four hours she passed over seventy segments of tænia.

SUBCUTANEOUS DIVISION OF THE NECK OF THE THIGH-BONE.—Mr. W. Adams has recently (*British Medical Journal*, Nov. 4) divided the neck of the thigh-bone subcutaneously, in a case of bony anchylosis of the right hip-joint with extreme deformity. The patient was a young man, aged 18, who had suffered with fever (probably rheumatic) when eight years of age, and the joint afterwards remained contracted. Mr. Adams first made a punctured wound, a little above the top of the great trochanter, by an enlarged tenotomy knife, which was then passed directly down to the neck of the bone, and the muscles were freely divided and the capsular ligament opened. Mr. Adams then passed his small saw down to the anterior surface of the neck of the bone, and, cutting from before backwards, divided this structure. The division of the bone occupied seven minutes. After the neck had been divided, some resistance was still offered, apparently by some bone which had been thrown out in front of the joint. This had been felt at the commencement of the operation, but, on flexing the thigh, it rapidly gave way, and the limb then moved freely in all directions. Mr. Adams then divided the tendons of the rectus and abductor longus muscles, and also the tensor vaginæ femoris muscle.

THE CHANGES PRODUCED IN THE DIAMETERS OF THE RED BLOOD-CORPUSCLES BY VARIOUS CAUSES.—Dr. Med. Wjatscheslaw Manassein, in the *Centralblatt* for October 28, gives the result of some observations which he has made as regards the changes in size which the red blood-corpuscles undergo under certain influences. 1. Septicæmic poisoning of animals was accompanied by a diminution of their principal diameter in animals which have round blood-cells, and in animals which have oval blood-cells by a diminution of both the diameters which can be measured. 2. The diameters of the red blood-cells are diminished when the animals are subjected to a temperature higher than that of their bodies. 3. The retention of animals in a space through which CO₂ is diffused causes a diminution in the size of the corpuscle. The same result is produced when a drop of blood is placed in a receiver with CO₂. 4. On the contrary, oxygen, whether inhaled or in a receiver, causes an increase in their dimensions. 5. Muriate of quinia in large or small doses, (6) cold, (7) hydrocyanic acid, and (8) alcohol in intoxicating quantities likewise cause an enlargement of the red blood-corpuscles, and so do all means by which the temperature of the body is lowered, except muriate of morphia; but this exception is explained when the influence of morphia upon the respiration centres is taken into consideration. 9. Finally, acute anæmia causes an increase in their size.

POISONING BY PETROLEUM.—In a case observed by M. Lugol (*British Medical Journal*, November 4; from *Répertoire de Pharmacie*, September, 1871), a woman, aged 40, swallowed a full glass of petroleum, with the intention of committing suicide. The pulse was small and thready; no nausea or vomiting; some epigastric discomfort. Magnesia was prescribed in abundance. In the evening there was a stool, on the surface of which swam petroleum, which was easily set on fire. Although the first symptoms were slight, gastro-enteritis presently set in, and death occurred on the twentieth day.

GLYCERINE LYMPH.—In the *Boston Medical and Surgical Journal* for September 14 we find directions for the preparation of glycerine lymph by the Prussian *Reichsanzeiger*, which are substantially as follows: The pustules of a healthy vaccinated person are opened with a needle, and the affluent matter carefully removed by a lancet. The lymph is placed in a watch-glass, and there thoroughly mixed with twice its quantity of chemically-pure glycerine and as much distilled water. The mixture may be preserved for use in capillary tubes or small medicine-glasses, and is considered equal in effect to pure lymph, care being taken to shake it before use.

THE DIAGNOSIS OF EXTERNAL HYDATID CYSTS.—Bergmann (*Centralblatt*, November 4; from the *Dorpat Med. Zeitschr.*, i. 75-98 and 113-161) reports a case in which a hydatid cyst as large as the fist was mistaken and removed for a lipoma. The mistake in the diagnosis caused the author to collect the histories of one hundred and two cases, in ten

of which the cyst was situated in the head, in nine on the neck, in nine on the side of the thorax, in fifteen in the mamma, in eighteen in the abdominal walls, in seven in the iliac and inguinal regions, in two in and on the testicle, in eleven on the upper extremity, and in twenty-one on the lower extremity. The patients were generally middle-aged. He recommends operative interference. The sac should be freely laid open, emptied, and injected with dilute or undiluted tincture of iodine, but it need not be removed.

CIRRHOSIS IN EARLY LIFE.—Dr. Cheadle reports in the *British Medical Journal*, November 11, a case of cirrhosis of the liver occurring in a lad eighteen years of age, who had, however, been in the habit of drinking daily a small quantity of gin, undiluted with water.

RELATION OF THE TINEA OF THE CAT TO THE TINEA OF MAN.—M. St.-Cyr (*British Medical Journal*; from *Veterinairum*, November, 1871) has shown that there is complete identity between the tinea of the child and that of the cat.

MISCELLANY.

REUNION OF THE ALUMNI OF THE JEFFERSON MEDICAL COLLEGE.—The Alumni Association of the Jefferson Medical College proposes to hold a social reunion during the meeting of the American Medical Association in this city in June next. The alumni of the College are cordially invited to attend. Those who contemplate being present are requested to send their names and addresses to either of the undersigned secretaries.

J. EWING MEARS, M.D.,
222 S. Sixteenth St.

R. J. DUNGLISON, M.D.,
636 N. Eighteenth St.

AN ANNUAL EXHIBITION FOR THE PHILADELPHIA MEETING OF THE AMERICAN MEDICAL ASSOCIATION.—The undersigned, Chairman and Secretary of the Committee of Arrangements of the American Medical Association, have been authorized to invite attention to the 'project of an exhibition of objects interesting to the medical profession, to be held in Philadelphia during the next session of the Association. This exhibition has been suggested as a desirable amplification of what has been customary on these occasions; and is expected to resemble, more or less, the displays of this kind which are prominent features of the annual meetings of the British Medical Association.

The aim of the committee will be, in this attempt, to provide for the practical and scientific entertainment of the members of the Association. Their design is to form a collection of instruments, apparatus, specimens, preparations, models, drawings, plates, books, and all other proper objects that may be obtained or presented in good time for the 'purpose; and so to arrange it for exhibition as to bring it under the convenient observation of every delegate and professional visitor. They hope, in this manner, without any sacrifice of the usual regard for their guests, to give to the arrangements as much of a professional character as may be in their power. Their desire is to aid in advancing the practical interests of the Association, by affording, through an always useful channel, some more direct means, as well as signs, of technical and scientific progress, as an attractive addition to the ordinary routine of written and verbal communications and discussions.

They cannot promise much success in a first experiment—undertaken at unavoidably short notice—beyond that of the

pioneer in preparing the way for something better in the future, in the light of experience, and with more time and opportunity for concerted action. The original intention was not to venture beyond Philadelphia and the neighboring cities in the search for material,—a restriction which seemed to be required by the limited space at the disposal of the committee, and the consequently greater difficulty of selection from the larger number of objects likely to be offered in answer to a general call. Nor was it doubted that a notification of the contemplated arrangement, to the societies and schools represented in the Association, would obtain sufficient attention to secure at least one object of the committee in encouraging a general desire to develop and produce the largest amount of illustration, as well as evidence, of professional improvement. Further consideration, however, has led to the present announcement; so that exhibitors from more distant parts of the country may have an opportunity to send their contributions,—mainly for the benefit, however, of the members of the Association, for whose especial information and entertainment the exhibition is to be prepared.

No mere display of local wealth and variety of means and appliances, or of individual superiority, will be encouraged beyond what is entirely incidental to the general purpose; nor will there be any attempt on the part of the committee to present representative or historical collections, although such collections may be cordially welcomed. Competition and completeness, therefore, are not to be expected. No special reports or comparative statements need be looked for; nor will the committee be responsible for the merits or demerits of the several objects exhibited, although obliged to exercise control as to admission and location. Novelty, recentness, and practical character will necessarily have weight in determining precedence; but not at the expense of whatever may be deemed especially characteristic or interesting, whether old or new. In a word, under their limitation of time, space, and means, they cannot undertake a general exposition or an industrial fair. Further and more specific details will be published as soon as practicable.

The committee confidently hope for encouragement and assistance, in an early practical response from their professional brethren, and from others who may have objects of interest to offer. They are bound to remind all concerned, however, that the contemplated collection must of necessity be, as much as practicable, select and characteristic rather than varied and extensive. It ought to be comprehensive, but can hardly be very full.

EDWARD HARTSHORNE,
D. MURRAY CHESTON.

THE CONDITION OF MEDICINE IN SPAIN.—A writer in the October number of the *Cornhill Magazine* upon the Social Condition of Spain says, "The state of the medical art and of the national health is, no doubt, one of the surest tests of a nation's civilization. The best Spanish physicians have studied at Montpellier and Paris. At home, they translate, as has been remarked, the foreign treatises, but their hospital practice is not good enough to form a body of skilled practitioners. It is true that the graduate in medicine is no longer forced to make oath that he will defend the Immaculate Conception of the Virgin, but there are customs hardly less absurd still existing. . . . Then the Spanish barber still bleeds, and the quack—the *pharmacopola circumforaneus* of antiquity—drives through the streets, on holidays, to draw teeth and

sell drugs, amidst an admiring crowd. Nor is his practice, it may be presumed, much inferior to that of higher practitioners. Men leave Spanish hospitals with legs badly set and sores still sloughing. The diet is mean and miserable, and foreigners sink under it for sheer want of nourishment and stimulants.

"Yet Spain requires the best resources of physic and surgery, for the Spaniards are not healthy, if we take the nation as a whole. The muleteer, the peasant, the vine-grower, are brawny and brown, no doubt, and the climate, wisely used, is full of life and luxury. Madrid, on the other hand, is a city dangerous to health, and the towns of the Mediterranean are remarkable even for those diseases which we of the North seek their shores to subdue or to avoid. Thus, there is much consumption both at Cadiz and at the cooler Barcelona. The rural type degenerates in towns more rapidly than among ourselves, and in some chief cities the population is gradually declining. . . . To complete what we have said of the health of Spain, let us note the large mortality among children prevailing in the cities. This is due, no doubt, partly to hereditary feebleness, but partly also to bad sanitary conditions and obsolete modes of nursing,—an excess of swaddling and coddling, with a minimum of air, water, and soap. That noble sight, a British infant exulting in its tub, excites only a shuddering wonder in a Spanish mother. The Spaniards take many precautions about their health. . . . They are a great people for drugs, and buy large quantities of quack medicines from every region of Europe."

Since the above was in type, we have seen a statement by M. le Dr. Lucien Papillaud, the correspondent in Spain of the *Gazette Médicale*, which had also copied the preceding extract, that the assertions contained in it are almost wholly devoid of foundation, and that the medical profession in Spain will compare favorably with that of France and of England.

FROM the *Constitutionnel* we learn that it is proposed by the French government to decorate with the ribbon of the Legion of Honor all the German physicians and *internes* who gave aid to the wounded of the French during the late war. The Emperor of Germany has thanked M. Thiers for this, and will in return bestow the iron cross with the white ribbon upon the French physicians and *internes* who distinguished themselves by extending succor to the German wounded. The *Constitutionnel* is glad that the *internes* are included in these propositions, and pronounces a eulogium upon this class for their courage, devotion, and self-denial. The *Union Médicale* of October 3, while agreeing with the *Constitutionnel* as to the merits of the *internes*, thinks that their patriotism will interfere with their wearing the iron cross or deriving great pleasure from its possession.

PROF. STILLÉ has courteously given us permission to make the following extracts from a letter recently received by him from Dr. John E. Spencer, at present stationed at Camp Douglas, Utah Territory:

"I inclose you some tables giving the range of thermometer and hygrometer as taken from the 'Post Meteorological Report.' They are incomplete, owing probably to the carelessness of former surgeons here. The notes for 1870 are so imperfect as to be entirely valueless. The rain-fall has increased very much in the last ten years. This I suppose to be due to the vast amount of irrigation and subsequent vegetation. The mountain-streams, which formerly flowed

directly into the Great Salt Lake, Utah Lake, or Jordan River, are now divided into thousands of little streams, and water a large extent of country.

"I can as yet give no reliable information as to what diseases are the most prevalent here. In the camp for the last three months we have had an epidemic of what the inhabitants call 'Mountain Fever,' which seems to be an ill-defined intermittent of the quotidian and tertian types. It generally yields to quinine treatment. We have had twelve cases of typhoid fever, with three deaths. All the cases have been severe, and all have been in patients who have been under treatment for the so-called mountain fever. In some of the typhoid cases we tried the sulphurous-acid treatment recommended by Dr. Wilks in the July number of *Braithwaite's Retrospect*. I am told that vesical calculi composed largely of lime are very common here."

Camp Douglas, Utah. Latitude 40° 46' 02'' North. Longitude 111° 53' 30'' West. Altitude 4800 feet.

1868.	Thermometer.			Hygrometer.			Highest temperature.	Lowest temperature.	Rain and melted snow.
	7 A.M.	2 P.M.	9 P.M.	7 A.M.	2 P.M.	9 P.M.			
Monthly mean.									
January	20.4	31.2	18.1	17.2	29.1	19.2	63	5	3.13
February	21.8	36.2	24.1	20.1	35.1	23.2	64	5	.64
March	36.1	49.1	38.2	34.1	44.1	37.2	70	23	1.50
April	44.2	57.7	47.1	42.3	51.1	47.2	71	30	2.22
May	50.5	60.	51.5	49.8	58.8	50.	75	41	5.00
June	55.3	75.	64.	51.3	67.6	61.6	90	43	1.01
July	68.9	83.	73.	61.1	68.2	64.6	93	53	1.36
August	66.8	83.7	71.8	61.8	66.6	62.2	96	55	.20
September	57.5	73.7	62.8	52.	57.5	54.5	88	45	1.11
October	50.6	71.1	53.1	45.5	63.3	50.	81	34	.06
November	35.3	51.8	37.3	31.6	47.2	33.8	68	22	.03
December	27.3	43.	30.3	25.6	36.6	28.3	55	19	1.29
									17.55

1869.									
January	25.	38.6	23.	23.1	33.3	23.3	46	10	3.36
February	28.5	42.2	31.6	23.5	35.9	30.6	54	6	.47
March	37.3	47.5	41.1	34.5	44.1	37.1	61	30	1.81
April	42.1	54.6	45.5	40.	51.5	42.	75	29	3.58
May	56.2	68.8	59.8	50.8	61.6	53.6	85	45	5.48
June	65.3	76.7	65.5	60.4	71.8	61.5	90	55	.22
July	71.5	80.3	70.7	58.7	64.3	62.6	97	57	.55
August	68.6	79.	72.	60.6	66.2	59.	91	61	.75
September	58.	68.8	57.4	49.9	56.	49.	87	37	2.00
October	47.3	63.2	51.2	40.9	49.6	43.6	75	37	.75
November	40.	51.	43.	37.7	45.3	40.	68	28	1.85
December	Notes very incomplete.								1.50
									22.32

1871.									
January	27.7	37.3	29.4	25.	33.6	27.2	62	8	1.60
February	28.4	38.1	31.	26.1	34.1	27.1	53	15	2.44
March	34.5	43.7	37.8	31.9	40.5	34.2	65	15	3.37
April	41.6	57.2	49.9	37.2	46.3	38.1	75	15	3.15
May	55.5	69.3	53.8	51.4	63.	49.2	82	40	5.00
June	69.1	84.1	69.2	59.2	77.1	63.	98	40	.30
July	73.6	87.9	71.9	60.7	69.6	62.2	102	50	—
August	70.6	85.6	68.3	58.1	64.8	54.3	105	56	—
September	70.	78.	76.9	54.9	61.7	53.	95	54	.10
October	47.8	56.4	47.4	39.9	46.6	39.3	70	27	.55
November	35.4	42.1	35.8	31.9	37.6	32.9	65	14	1.83
December									

Rain and Melted Snow.

Year 1863	.	.	.	.	.	.	7.47 inches.
" 1864	.	.	.	.	.	.	14.92
" 1865	.	.	.	.	.	.	17.56
" 1866	.	.	.	.	.	.	24.89
" 1867	.	.	.	.	.	.	24.60
" 1868	.	.	.	.	.	.	17.55
" 1869	.	.	.	.	.	.	22.32
" 1870	.	.	.	.	.	.	20.96

RESPONSIBILITIES OF PHYSICIANS.—In a recent trial in Ireland, the Lord Chief Baron finally laid down very distinctly what has always been understood by our profession as the rule of law,—that a surgeon is bound to bring to his task generally competent skill and *bona fides* with a view to effect cure, and that it is beyond the custom and province of a court of law, in a case of alleged murder, to enter into a minute technical discussion of the details of treatment, when it has satisfied itself that the surgeon was a competent and qualified person, acting to the best of his knowledge and in an upright intention to effect the cure of his patient or to give him a possible chance of life.

METEOROLOGICAL.—The following facts are derived principally from the *Evening Telegraph*. The mean temperature of the month of December, 1871, was 30°.88 Fahr. The highest temperature recorded during the month was 45°, on the 26th; the lowest was 2°.5 Fahr., on the 21st, which is also the lowest temperature recorded for the month for the past quarter of a century, and one of the lowest on record. The highest mean temperature on record for the month of December is 45°, in 1848; the lowest, 25°, in 1832. The average temperature of the year 1871 was 54°.99; 1°.39 above the average temperature of the past eighty-two years. Two months, March and April, showed a higher mean temperature than was ever before recorded for the corresponding months, while the month of December fell somewhat below the average.

The total rain-fall for the month was 2.26 inches; the average rain-fall for the corresponding month during the past thirty-four years being 3.92 inches. The total rain-fall during the year 1871 was 47.41 inches, being 1.57 inches more than the average rain-fall for the past thirty-four years.

ARTIFICIAL LIMBS FURNISHED BY THE GOVERNMENT.—According to the report of Surgeon-General Barnes, the number of mutilated soldiers who had received artificial limbs from the government previous to July 1, 1870, was 7887. By act of Congress, after that time applicants might receive either the limbs or a money commutation; and it is a singular fact that most of the veterans prefer to commute. Thus, against 104 who received arms we have placed 4067 who took the money; legs, 1117; commutators, 3114. Only 5 footless men took feet, and 51 preferred cash. It is more than likely, however, that a considerable portion of the money thus paid has been expended by the recipients in procuring limbs more to their liking than those furnished by the Department; or perhaps they believed that they could by a private purchase fit themselves better or make a better bargain; and those to whom the country owes so much have a right to the indulgence of their personal whims in such a matter. We hope that not much of the money was received only to be imprudently spent.

MEDICAL SERVICE IN THE NAVY.—The Secretary of the Navy has recently announced to the navy, in a general order, No. 164, that no assistant-surgeon will be examined for promotion until after he has served in his official capacity "at least two years on board of a public vessel of the United States at sea." This is in accordance with the letter and spirit of the law, which requires that the professional qualifications of candidates shall be ascertained by suitable examinations before they are appointed assistant-surgeons. The requirement of two years' service at sea prior to promotion, specified in the

act, is to test the personal aptitude for "life on the ocean wave," without which a medical officer is worthless in the naval service. Gentlemen who have been commissioned three years may be examined for promotion at the discretion of the Secretary of the Navy, provided they have been qualified by two years' experience at sea. At the expiration of five years' service they are legally entitled to be examined for promotion, if qualified by at least two years' service at sea.

THE ROOSEVELT HOSPITAL.—We extract from the *New York Medical Journal* for December, 1871, the following organization of this magnificent new hospital, which was opened for the reception of patients on the 2d of November. The portion of the building now open will accommodate one hundred and fifty patients, but when completed the hospital will have ample capacity for four hundred.

Trustees.—Geo. T. Trimble, Frederick E. Mather, Edward Clark, Ed. Delafield, Augustus Schell, John M. Knox, Royal Phelps; James E. Roosevelt, Adrian H. Muller.

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Committee on Examination.—Drs. Sands, Watts, and Delafield.

Superintendent.—Dr. H. Paine.

House Physician and Surgeon.—Dr. Wm. H. Schuyler.

A NEW USE OF CHLORAL.—Hydrate of chloral seems to develop fresh virtues every day. A case of rattlesnake-poison has lately been cured by it, at Point Pleasant, New Jersey. A young man bitten by a rattlesnake, and exhibiting the usual violent and alarming symptoms, was treated with the hydrate, five doses of twenty grains each being administered, when sleep followed, and the patient awoke after several hours with every symptom of the poisoning gone.

REMARKABLE FECUNDITY.—A correspondent in the *Richmond and Louisville Medical Journal* reports the following case of remarkable fecundity:

A colored woman living at Spring Hill, Tennessee, not yet thirty-six years of age, has given birth to twenty-six children:

At single births, all living	7
Twin births in succession eight times	16
Triplets	3
	26

All the children of plural births died shortly after birth.

A BARONETCY has been bestowed upon Professor Christison. The *Lancet* of November 4, in commenting upon it, says, "Full of years, Sir Robert Christison still possesses a vigor of body and mind which ranks him with most of his younger colleagues, and which must enhance the public grati-

fication of the dignity now conferred upon him, as likely to derive additional lustre from the prolonged life he may in all likelihood enjoy."

MORTALITY OF THE CITY OF PHILADELPHIA DURING 1871.—The deaths from all causes in 1871 numbered 16,993, being an increase of 243 over those in 1870. The number of deaths from phthisis during 1871 was 2233, which is very nearly in the proportion to the whole number of deaths of one to seven and a half. The number of deaths of children under five years of age was 7153, which is about 0.42 per cent. of the whole mortality. During 1871 the deaths from smallpox numbered 1879, of which 720 were of adults and 1159 of minors, 578 of the 1159 being boys and 581 girls. Of the total number of deaths from this disease, 1016 were males and 863 females. Up to the last of September only 47 had died from smallpox, and after that time 1832 died. If a deduction be made for deaths from this disease, as well as for stillborn children, numbering 875, the total deaths from other causes will be seen to be less than those of 1870.

MORTALITY FROM SMALLPOX.—The number of deaths from smallpox in Philadelphia during the weeks ending December 30, 1871, and January 6, 1872, were 453, of which 283 were of minors.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending	
	Dec. 30.	Jan. 6.
Consumption	57	59
Other Diseases of Respiratory Organs	52	57
Diseases of Organs of Circulation	12	12
Diseases of Brain and Nervous System	55	56
Diseases of the Digestive Organs	13	17
Diseases of the Genito-Urinary Organs	3	12
Zymotic Diseases	241	254
Cancer	4	7
Casualties	11	9
Debility	27	20
Intemperance	4	1
Old Age	17	12
Poisoning	1	0
Scrofula	1	2
Stillborn	22	24
Suicide	2	0
Tumors	0	1
Unclassifiable	14	14
Unknown	4	2
Totals	540	559
Adults	253	261
Minors	287	298

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM DECEMBER 19, 1871, TO JANUARY 4, 1872, INCLUSIVE.

FRANTZ, J. H., SURGEON.—By S. O. 479, War Department, A. G. O., December 30, 1871, granted leave of absence for thirty days, with permission to apply for an extension of sixty days.

BREWER, J. W., ASSISTANT-SURGEON.—By S. O. 225, Department of the Missouri, December 16, 1871, to report in person without delay to the Medical Director of the Department.

MACKIN, CHARLES, ASSISTANT-SURGEON.—By S. O. 473, War Department, A. G. O., December 19, 1871, granted leave of absence for sixty days from November 28, 1871.

CRONKHITE, H. M., ASSISTANT-SURGEON.—By S. O. 261, Department of the South, December 16, 1871, to proceed to Spartansburg, S. C., for duty at that post.

WILSON, WILLIAM J., ASSISTANT-SURGEON.—By S. O. 226, Department of the Missouri, December 18, 1871, to proceed without delay to Fort Union, N. M., for temporary duty at that post.

THURSDAY, FEBRUARY 1, 1872.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON CONJUGAL ONANISM AND KINDRED SINS.

BY WILLIAM GOODELL, M.D.,

Clinical Lecturer on the Diseases of Women and Children in the University of Pennsylvania.

GENTLEMEN,—Inasmuch as certain members of the "London Dialectical Society" have been poisoning the public mind with subtle arguments against "Over-Population and Large Families," I purpose this morning to devote my hour to some subjects which are not strictly medical, and yet with salient medical aspects,—subjects in themselves vile and filthy, but which concern us as physicians. The wise son of Sirach has laid down the abstract truth that "the knowledge of wickedness is not wisdom;" and yet, for the correct interpretation of diseases, we must intrepidly search out their causes, whether moral or physical, however loathsome or impure they may be. Receive, then, these necessary supplements to your instruction in the attitude of true students; for to such the knowledge of immorality cannot be immoral.

Early in the practice of your profession, you will, I am sorry to say, find out that many of your patients, who should be the heads of large families, are practising detestable arts to avoid offspring. You will, on the other hand, be approached, perhaps indeed be hard pressed, by husbands, and, for that matter, by wives also, for some method of congress unattended with the risk of impregnation. You will also be consulted for the mental and bodily infirmities resulting from these and other sexual sins. You must not, therefore, go out into the world ignorant of these evils, and consequently incompetent to grapple with them. It is, however, so hard a task to discuss such subjects in acceptable language, that I confess to some squeamishness, and would much rather refer you to suitable text-books. Unfortunately, although our land is flooded with a copious literature treating of the conjugal relations, with rare exceptions it panders to our worst instincts and defiles with the slime of an impure fancy. Impudent quacks and men of battered reputations must not be your guides; far better is it for you to learn a new thrust of fence from a friendly foil, than from the stab of a foe.

My purpose is less to discuss the moral obliquity of these secret sins of the community than to show the resulting disorders. Yet I shall not limit myself to the one point of view, for the conjugal relation is twofold in its nature: it has a moral as well as a physical expression, but so interwoven that it is hardly possible formally to dissociate them. Nor would it be wise for a physician so to do; for who, so well as he, can determine how far a disturbance in the one will affect the other? Moreover, so irreparable is the moral and physical degradation resulting from these vicious sexual relations, so damaging are they to good health and to good morals, so fatal to national prosperity, that I cannot go far astray in assaulting them with every available weapon.

You have all had a religious training and respect the teachings of the Bible; let us see what light they throw upon the conjugal relation. The first words addressed by God to our first parents conveyed the following blessing and command: "And God blessed them, and God said unto them, Be fruitful, and multiply, and replenish the earth." The same blessing and com-

mand, in precisely the same words, were twice given to Noah. Abraham and Ishmael received the same blessing, and so did Isaac thrice in one chapter. Laban's household sent away their sister Rebekah with the same blessing. "Give me children, or else I die," was the cry of Rachel. Jacob called his offspring "the children which God hath graciously given thy servant;" and the same patriarch, when dying, raised himself upon his staff in order with greater solemnity to invoke upon his beloved son Joseph "blessings of the breasts and of the womb." The Psalmist declares that "children are an heritage of the Lord: and the fruit of the womb is his reward;" and in Exodus we read that if a man "take him another wife, her food, her raiment, and her duty of marriage, shall he not diminish." Throughout the Old Testament you will find that fruitfulness was regarded by Jew and Gentile as the greatest of earthly blessings, and that as such it was the reward of the righteous, and as such it was withheld from the wicked. How a profanation of this blessing was regarded by God you all know from the history of Onan, who was slain for resorting to one of the "preventive measures" in vogue at the present day. Again, in the New Testament we find St. Paul giving the following advice to the married Christians at Corinth: "Defraud ye not one the other, . . . that Satan tempt you not for your incontinency. Let the husband render unto the wife due benevolence; and likewise also the wife unto the husband," etc. I have not the time to quote all that the apostle says upon this subject; but, mind you, this advice was given in troublous and persecuting times; times in which the temptation was great to prevent the increase of families; times to which the words of our Saviour were especially applicable: "Woe unto them who are with child, and to them that give suck in those days."

To these scriptural precepts and blessings you may perhaps object that they were designed for special purposes, and that, as such, they cannot concern the present generation of men. While unwilling to admit this, I reply that there is a natural religion as well as a revealed religion: the one, God's book; the other, Nature's,—a "Second Bible," as Bacon happily terms it. You have heard what the one enjoins; now listen to the teachings of the other. Let me turn to our Case-Book and read out the history of one of our clinical patients. Some of you have seen her in my private room, but, for obvious reasons, I have not brought her before the assembled class.

A. B., aged 30, married ten years ago, has had two children, one of them dying shortly after birth. Six years ago she and her husband came to this country and opened a small store. She was at that time in robust health, "very happy," and cheerfully waited upon their customers. For no assignable reason, her health soon began to fail, and six weeks ago she came for advice in a truly pitiable plight. To use her own language, she was "very weak and miserable;" "crying all the time;" "cannot remember anything for ten minutes;" forgets the price of the goods in her husband's store; was "constantly mislaying needful articles, and making mistakes in making change." She was "very suspicious," fancied "that everybody was against her and talking about her," and confessed to being extremely jealous of her husband. In addition to these mental disturbances, she eructates large quantities of wind, is obstinately costive, has violent palpitations of the heart, and cannot go up one flight of stairs without getting out of breath. She often staggers, loses consciousness, and sometimes falls from vertigo; is annoyed by a persistent *globus hystericus*, and has no appetite whatever. The catamenia appear every three weeks, are abundant, but unaccompanied with pain. She has, however, a constant pain in the sacral and in the left infra-mammary region; also a frequent desire to pass water, and much "bearing down" of all the pelvic organs.

Without wearying you with every detail, in one word, the subjective symptoms of uterine disease which she presented were more numerous and more marked than I had ever before seen in one patient. In making a vaginal examination—to which she reluctantly submitted—I was struck with the excessive sensitiveness of her tissues, and with the uncontrollable excitement under which she labored,—symptoms hitherto in my experience limited to unmarried women addicted to self-abuse. I found the vagina crimson and hot, the womb tender to the touch, intensely congested, somewhat prolapsed, and in the first degree of retroflexion. The sound, passing through a patulous internal os, caused much pain at the fundus, and a slight hemorrhage upon its withdrawal. The *os tincae* was surrounded by a collar of erosion, and plugged with the characteristic glairy secretion. Finally, she flinched from any pressure, however light, over each ovarian region. The significance of these symptoms I explained to her, but I need not to you.

She then took me aside, and, unsolicited, told me her history. Being in straitened circumstances upon their arrival in this country, and withal anxious to lay by money, she and her husband had agreed to have no more children. With this view, she had submitted to the following fraudulent and one-sided expedient: at the height of the orgasm the husband withdraws from her person, and thus commits the crime for which Onan was punished with death. For six years such incomplete coitions had been practised, usually as often as five times, and never less frequently than three times, a week. She had at first attributed her ill health to change of climate, but quite recently had begun to suspect its true cause from an unexpected improvement in all her symptoms during the casual absence of her husband on business.

Prompted by this suspicion, she came to consult me as to its correctness, and actually, in case it was confirmed, to learn from me some other preventive method of congress. I explained to her the sinfulness of her conduct, and urged her to receive the approaches of her husband in a normal way, as otherwise nothing could be done for her. This, however, she flatly refused to do, saying she would much prefer a separation or even a divorce from him. Upon inquiry, I learned that her "husband was not the man he used to be;" that he was morose and dyspeptic, complaining much of general weakness and loss of appetite. Two weeks later, she came with much glee to say that by a mutual agreement this incomplete act of coition was in future to be limited to twice a week, and that she was now ready for treatment. Whereupon I refused to have anything more to do with her; and I have not seen her since.

You have heard, gentlemen, this sad history,—the history of a woman whose health is shattered, whose morals are perverted, whose mind is verging towards insanity. Now, what physical law of her being, what moral obligation, has been broken? Why has Nature been so resentful, and why these fierce reprisals? These are questions which press for an answer.

The sexual instinct has been given to man for the perpetuation of his species; but, in order to refine this gift and to set limits to its abuse, it has been wisely ordered that a purely intellectual quality—that of love—should find its most passionate expression in the gratification of this instinct. Dissociate the one from the other, and man sinks below the level of the brute. Destroy the reciprocity of the union, and marriage is no longer an equal partnership, but a sensual usurpation on the one side and a loathing submission on the other. Consider the moral effects of such shameful manœuvres: wedlock lapses into licentiousness; the wife is degraded into a mistress; love and affection change

into aversion and hate. Without suffering some penalty, man cannot disturb the conditions of his well-being or trespass beyond its limitations. Let him traverse her physical laws, and Nature exacts a forfeit: dare he violate his moral obligations, an offended Deity stands ready to avenge them. That this law is immutable, witness, from the history read to you, the estrangement between husband and wife; witness his ill health and ill temper, and the wreck of body and mind to which she has been reduced.

The husband suffers mentally, because no man can behave in so unmanly a way without a keen sense of self-abasement, without being stung by the chastisement of remorse. Dishonor the body, the temple of the soul, and you dishonor the soul. Again, by this cowardly recoil, his enjoyment in the act is so blunted that he is tempted to seek elsewhere for those pleasures which are denied him at home. Further, he suffers physically, because, although he passes through the crisis of the sexual act and completes it in that sense, yet, owing to his withdrawal from the person of his wife just before the moment of ejaculation, this acme of the orgasm, by the lack of the normal and necessary adjunct—viz., the rugous and constricting vagina—is not sufficiently prolonged to wholly empty the *vasa deferentia*. Enough of the semen remains behind to tease his organs and to kindle in him desires too importunate to tolerate any great self-control. He is thus goaded on to such sexual excesses as no brain nor brawn can long support; for a constant drain on the life-giving fluid implies a constant expenditure of nerve-force. Early exhaustion and premature decrepitude will inevitably ensue if this practice of "conjugal onanism" is persisted in. Nor is this name a misnomer; for there is no essential difference between this habit and that of masturbation. Both injure in precisely the same way, and for precisely the same reasons. It does, indeed, seem to be the law of Nature that man must suffer the punishment of the onanist if he parts with the "seed of another life" in any other way than in that by which it tends to become fruitful.

The wife suffers the most, because she both sins and is sinned against. She sins, because she shirks those responsibilities for which she was created. She is sinned against, because she is defrauded of her rights. Lawful congress completely performed so far satisfies an imperious instinct, that attendant local congestions are at once relieved, and to great nervous excitement succeeds a calm repose of body and mind. On the other hand, conjugal onanism provokes in her desires which keenly solicit that very gratification which is denied by the nature of the act. The excessive stimulation of the whole reproductive apparatus remains unappeased. A nervous superexcitation continues, which keeps up, as in our patient, a sexual excitement and a hyperæsthesia of the parts. By forfeiting her conjugal rights, she does not reach that timely conjuncture which loosens the tension of the coarctive muscles of her erectile tissues. Hence the congestive orgasm of the vagina, uterus, Fallopian tubes, and of the ovaries does not at once pass away, but persists for some time,—perhaps is not wholly effaced before another incomplete coition brings a fresh instalment. Thus arise engorgements, erosions, and displacements of the uterus, and inflammation of its appendages, accompanied, of course, by all those protean mental and physical manifestations which I have so often pointed out to you. She takes distorted views of life and of the marriage relation, and harbors resentment against her husband as the author of all her ills.

But we have not yet done with the train of evils. The uterine, ovarian, and vaginal plexus of veins insculcate freely with the hemorrhoidal vessels, and consequently with the *venæ portarum*. Hence the tur-

gescence of the one group of blood-vessels leads to engorgement of the other, and the persistent congestion of the intra-pelvic veins determines portal obstruction, and *vice versâ*. The absence of valves in all these vessels, and the erectile structure of the reproductive organs, favor this turgescence. As a consequence, functional derangements of the liver are commonly associated with uterine disease. No gynecologist has failed to observe the alternate relation of cause and effect between these two conditions. To this interdependence may we refer the obstinate costiveness, the vertigo, the loss of appetite, the dyspeptic melancholy, and the suspicious nature of our patient.

Again,—for the ill effects of such practices accumulate,—the very barrenness aimed at by these criminal expedients is in itself a source of disease. In sterile women the absence of pregnancy prevents a break in the constantly-recurring catamenia, and the physiological congestion of the womb by ceaseless repetition is liable to become pathological. Add to this the unrelieved congestions arising from incomplete intercourse, and a prolific source of uterine and hepatic disorders is at once manifest.

I have so lately warned you against the disorders arising from excessive coitus, even when normally performed, and more especially from that indulged in during the fatigue and discomforts of the honey-moon journey, so often the starting-point of uterine disease, that it is needless for me to recur to that subject. I wish, however, in this connection, to call your attention to another source of sexual trouble, for which your advice will be sought. Either from undue ardor on the part of the husband, or from the too frigid nature of the wife, the sexual crisis with him is over before hers is reached. Such misadventures are productive not only of unhappiness, but also of disease. Here, as in conjugal onanism, the female reproductive organs are kept in a state of congestion, which is followed by like ill results, the difference being only in degree and not in kind. For this lack of reciprocation—not, however, fatal to impregnation—you will counsel to the husband the practice of some self-denial as regards the frequency of congress, and greater self-control during the act, together with a recourse to such venial promptings as a warm and honorable affection may suggest.

But, to return from a digression, there are other artifices—nay, even equipments borrowed from the brothel,—for the purpose of avoiding conception, which may well alarm publicists and statesmen. For, vile as they are, they have received the open sanction of those English political economists who forget that crime and vice and human suffering in their land are due less to “overpopulation and large families” than to absenteeism, to the laws of primogeniture and entail, to the grasping avarice of the rich, and to the intemperance, ignorance, and shiftlessness of the poor.* All these expedients operate by directly preventing the access of the spermatozoa to the uterine cavity, by destroying them, or by washing them away; but they are all hurtful equally to mind and to body. If it is hazardous for an overheated stomach to receive a glass of iced water,—its natural and accustomed beverage,—how much more will it be to deluge the over-congested womb with such foreign fluids as cold or astringent injections! On the other hand, those mechanical contrivances for limiting the range of the spermatozoa so blunt the pleasure as to lead to unfaithfulness or to their disuse. Moreover, in common with other teachers, I am old-fashioned enough to believe that pregnancy is a necessary condition to healthful

and happy marriages, and, further, that coition is innocuous only when complete in both husband and wife and when the germinal fluid bathes her reproductive organs. It is not always possible to trace the relation between cause and effect; some link in the chain of sequences often eludes our search. The *modus operandi* of many of our most common drugs is not known, and yet our confidence in them is not shaken, because the counterweight of our experience is greater. Therefore, for no other reason than that the common experience sanctions this postulate, I believe that the semen, aided of course by the general relaxation following the crisis, has a special property of allaying the congestive orgasm and the vascular turgescence of the venereal excitement.

For the limitation of families, some conscientious political economists recommend absolute abstinence. But, if the “nervous erethism” of long engagements is assigned by alienists as a common cause of insanity, and by physicians as a frequent source of uterine disturbance, what derangement of body and mind may not spring from this forced continence! Perhaps, however, we are wasting words on impossibilities. There is a wide-spread delusion, as old as the art of medicine itself, that intercourse after the tenth day following the cessation of the menses is not attended with the risk of impregnation. But ovulation is not necessarily menstruation; and he who constructs domestic time-tables or trusts to his almanac will find that accidents may happen in the best-regulated family.

There are, in fact, no harmless or available means for thwarting Nature's plain intention; for if they should not happen to injure the body, they assuredly will the mind. How immoral must be the effect when husband and wife meet, not “to endear each other,”—as Jeremy Taylor quaintly has it,—but to adjust accoutrements, to compound antidotes, and to consummate with pre-arranged precautions and cold-blooded calculations a union which for its perfect mental and physical fruition should be spontaneous and unrestrained! All these artifices soil the purity of thought, and degrade marriage into a carnal compact which regards alone the necessities of the flesh.

Such, then, are my views upon these so-called “misery checks” and “common-sense measures;” and I feel that they cannot be gainsaid. I dare any political economist to show me one innocuous expedient whereby conception may be avoided. I challenge him to name a single preventive plan which will not do damage either to good health or to good morals. Even natural sterility is a curse: show me a house without children, and, ten to one, you show me an abode dreary in its loneliness, disturbed by jealousy or estrangement, and distasteful from wayward caprice or unlovable eccentricity. Depend upon it, gentlemen, there are no thornless by-paths by which man can skulk from his moral and physical obligations; no safe stratagems by which he can balk God's first blessing and first command. Therefore, as hygienists, if not as moralists; as physicians, if not as patriots; as guardians of the public health, if not as philanthropists, I charge you to frown upon such practices and take a bold stand against them. Else, see to it that in the end you are not held to a strict account for the knowledge you have this day gained.

TREATMENT OF PRURITUS VULVÆ.—Those who have had any experience in the treatment of this troublesome affection will learn with interest that Mr. McGrath states (*The Canada Lancet*, November, 1871) that he has found the following, applied by means of a soft sponge after ablution morning and evening, attended with the most satisfactory and speedy result:—Biborate of soda, ʒij; hydrochlorate of morphia, gr. xx; hydrocyanic acid, ʒj; glycerine, fʒj; distilled rose-water, fʒviij.

* Besides the causes here enumerated, other unsuspected correlations undoubtedly exist, for Social Science has hardly yet reached to the dignity of a science. Thus far, it consists mainly of disjointed studies and isolated observations, which yet require the *functura callida* of collation and generalization.

ORIGINAL COMMUNICATIONS.

SOME OBSERVATIONS CONCERNING THE DEVELOPMENT OF BLOOD-CORPUSCLES IN THE RED MARROW OF BONES.

BY H. C. HAND, M.D.,
St. Paul, Minn.

A PRIORI, what is more improbable than that the most highly organized elements of the blood, its red and white corpuscles, should have their origin in the marrow of bones, or, indeed, should have any connection whatever with that marrow except as subserving to its nutrition?

When Neumann and, later, Eales published the results of their observations on this point, the ground they occupied was so novel that I confess to have looked on them as deluded enthusiasts, and to have commenced a series of observations after them with the expectation of differing *toto cælo* from them in my conclusions. I had not proceeded far before becoming half convinced of the correctness of their views, and only a little farther, before being forced to look upon Neumann as a great discoverer in the domain of physiology, instead of as a deluded enthusiast.

I need scarcely say that my conclusions agree essentially with those of the German observers: entirely, indeed, as to the *place* of origin of the blood-corpuscles; partially, as to the *mode* of origin.

As the word "leucocyte" will be frequently called into requisition in the course of these remarks, it will be of advantage to state briefly my understanding of that word.

A leucocyte, then, is a granular cell, of which the ordinary diameter is $\frac{3}{8000}$ of an inch, but varying at times from $\frac{3}{8000}$ up to $\frac{2}{8000}$ of an inch, or even somewhat larger.

Its granular contents are cleared up by water, and more rapidly by acetic acid; when thus cleared, from one to several nuclei may be seen in its interior.

Such cells exist normally in the blood as its white corpuscles, and in the red marrow as the "myeloid cells" of Virchow, the "lymphoid cells" of Neumann; are sometimes found in œdematous connective tissue, and constitute the well-known pus-corpuscle, both as found on free epithelial surfaces and imbedded in the tissues. Occupying such diverse positions, and fulfilling such diverse functions in the economy both of health and disease, we are obliged to say that leucocytes with their specific form are destitute of a common specific nature. Let me state the idea more fully. Leucocytes of one class, as those of the blood, undoubtedly have specific characters, and enjoy those specific characters in common with all their fellows of the blood kind. Leucocytes of pus enjoy like intimate relations with all their fellows of the pus kind.

By the eye the two kinds are not distinguishable from each other; they have a form in common, the *specific form* of the leucocyte. But here their similarity ends; those of one kind do not perform, and probably are incapable of performing, the functions of those of the other kind; in other words, they have no *specific nature in common*. The same difference exists in the case of the leucocytic myeloid cells as regards their relations to pus-corpuscles, but in a less degree as regards their relations to the white blood-corpuscles.

Even if we accept Cohnheim's theory of suppuration, we can scarcely fail to believe that when the white blood-corpuscles have become pus-corpuscles by the act of passing out of the vessels they have, by this act, lost the power of ever again performing the functions of their original state. But pus is not always formed after Cohnheim's plan; for, passing over Virchow's plausi-

ble and attractive theory of rapid division of connective-tissue corpuscles, we all have seen, again and again, in the discharges from mucous surfaces, those gentle gradations making the transition imperceptible from perfect epithelial cells to perfect pus-corpuscles, as described by Virchow, Beale, and others. Thus we have found a leucocyte differing in *origin*, as well as in *function*, from the leucocyte seen in the blood as its white corpuscle, and yet the two are not distinguishable from each other microscopically.

Histologists are so generally agreed that the spleen and allied glands are instrumental in the production of white blood-corpuscles, and have such strong reasons for thinking the lymphatic glands active in the same office, that we have no intention of disputing this power in said organs.

Not alone in these glands, however, do white blood-corpuscles take their origin. The existence of leucocytes in red marrow has been recognized for years. Thus, Virchow, in his lectures on Cellular Pathology, delivered in 1858, says, "From marrow to perfectly fluid tissues is only a short step, and the boundaries separating marrow and pus cannot in many places be assigned with any degree of certainty." And, again, "The marrow of a *new-born* infant could at any time be passed off as a granulation both chemically and microscopically. Granulations are nothing more than a young, soft, mucous tissue, analogous to marrow. There is an inflammatory osteoporosis which, as has been correctly stated, merely depends upon an increased production of medullary spaces, so that the process which is quite normal in the interior of the medullary cavity is met with also more externally in the compact cortex. It (the osteoporosis) is distinguished from granulating peripheral caries only by its seat. If you go a step further, and suppose the cells, which, in osteoporosis, are present in moderately large numbers, to become more and more abundant, whilst the intercellular substance constantly becomes softer and diminishes in quantity, we have *pus*. The pus is here no special product, separable from the other products of proliferation and formation; it is not identical with the pre-existing tissue, but its origin can be directly traced back to the elements of the pre-existing tissue." Notice, first, that he speaks of the marrow of the new-born infant: in the infant all, or nearly all, the marrow is *red marrow*; in the adult only the marrow of the spongy bones remains red, that of the cylindrical marrow-cavities has become yellow and fatty. Notice, next, that he states in one place that the boundary between marrow and pus cannot be assigned with any certainty, and in another that pus-corpuscles are not identical with myeloid cells. Recognizing their frequent *identity of form*, he says they cannot be distinguished from each other; but, considering their wide difference of function, he plainly states that they are *not identical*.

The question necessarily rises as to how the blood-corpuscles which have their origin in the marrow may find their way into the vessels. Neumann supposes that the white corpuscles force themselves through the capillary walls by amœboid movements: this he advances as theory only. Another view, also purely theoretical, may be advanced, viz., that in the blood-making marrow the vascular walls lose themselves in the formation of lacunæ, like the lacunæ of the spleen described by Mr. Gray. This suggestion has the advantage over Neumann's of making the entrance as easy for the red as for the white corpuscles.

Marrow being a connective tissue, and its cells, both when large and fatty and when in the form of leucocytes, being connective-tissue cells or corpuscles, those leucocytes which escape from it to become white blood-corpuscles, by virtue of their birthright are still con-

nective-tissue corpuscles. The red corpuscles have the same birthright and deserve the same name, although further removed from the original type than their white brethren. Hence, if the most tangible elements of the blood are connective-tissue corpuscles, we must class that fluid with the connective tissues, of course taking the word tissue in no strict sense. The softer connective tissues we know to be principally engaged in sustaining, in nourishing, in helping to reproduce those higher structures in which they are placed. It furnishes a pleasing analogy to view the blood as the softest and most nutrient connective tissue of all.

If blood be a connective tissue, then, whether we accept Virchow's or Cohnheim's theory of suppuration, the pus-corpuscle is still a connective-tissue corpuscle, only in one instance it has passed through the intermediate stage of white blood-corpuscle; in the other, it has not.

Next let us consider the place of origin of the *red corpuscles*. That these are not formed solely and at all times in the bones is proved by the fact that the blood of insects sometimes contains faintly-reddish corpuscles; and, again, that the first crop of corpuscles of all embryos is derived from the same mass of cells by which the heart and vessels are formed, and before the marrow, or even the bones, have made their appearance. Observe that the reddish corpuscle of the blood of insects differs in nothing except its reddish tinge from the white corpuscle. In other words, the white corpuscle has grown directly into the red.

My observations have been made on the marrow of the reptilia, of oviparous vertebrata, and of mammalia. The results will be stated first, and afterwards those points in which they differ from Neumann's views will be separately noticed.

In the observations on reptilia, ten in number, confined to frogs and toads, the following characters were found: First, a multitude of myeloid cells, some of which are of the size of ordinary leucocytes, while many are larger, up to double or triple that size. In these larger cells is often one nucleus agreeing in all its characters with a typical leucocyte, or there may be two, three, or many such nuclei; that is, myeloid cells multiplying by division of nucleus, and giving birth to a progeny of young myeloid cells, leucocytes. Evidently of this character are those cells mentioned by Virchow (*Cellular Pathology*, p. 346) in these words: "Recently, in the marrow of bones, especially in young children, cells have been observed where the entire structure is full of nuclei, which often attain the size of the whole cell." From the accompanying figure it becomes evident that by "attain the size of the whole cell" he means that the mass of nuclei completely fills the parent cell.

Second, a growth, or change, of myeloid cells (leucocytes) into oval, nucleated red corpuscles. This change, when traced through its several stages, as seen in one field in the cells of various appearance, is as follows: One of the larger leucocytes loses its granular aspect, becomes faintly colored, changes from round to oval, grows yet larger and more deeply colored, the cell-contents shrink from the cell-wall to form the nucleus, thus concentrating most of the color in the nucleus, and leaving the rest of the corpuscle comparatively transparent. At last is seen as perfect a red corpuscle as the first cell was a perfect leucocyte. The intermediate forms are perfectly comprehensible when viewed as a part of the series; but, isolated, they are incomprehensible and, as it were, hermaphrodite.

Third, the character of the nuclei of the red corpuscles demands notice, and this character was found, although in a less degree, in the blood generally as well as in that from the marrow. I refer to a marked granular condition of the nuclei, often existing of itself, and, when not thus existing, readily produced by the addi-

tion of dilute acetic acid,—a condition in which they very closely simulate leucocytes; in fact, so closely that, the enclosing corpuscle being destroyed, they are no longer distinguishable from the same,—a further proof of the non-specific character of leucocytes.

That the nuclei in the red corpuscles of marrow, and, to anticipate somewhat, their equivalents, the red corpuscles found in the myeloid cells of mammalia, are so often granular, shows the granular condition to be one indicative of youth and immaturity.

In this connection, the crenation and granulation of the red corpuscles in low fevers, especially typhus and relapsing, occur to me as caused in a way the reverse of that usually accepted, namely, that the mature blood-corpuscles are disorganized by the fever-poison; more in accordance with the above facts would it be to say that the fever-poison deranges the blood-producing tissues, and, as a result, the red corpuscles are sent from the laboratory imperfect, immature,—in other words, granular. The crenation wholly or in part, and also the granulation to some extent, are undoubtedly the result of physical causes, such as increased specific gravity of the serum, or its vitiation by retained secretions.

In one frog, shrivelling red corpuscles were found in the marrow. In another, both in the marrow and in the blood from other portions of the system, the nuclei of a good proportion of the red corpuscles were seen to have divided into two parts, one of which would appear in some instances as escaping from the corpuscle almost naked; or, again, the two halves of the nucleus would be seen dividing equally their containing corpuscle. This one case of self-multiplication of red corpuscles stands too much by itself to form a justifiable basis for even an opinion; it is simply given as it was observed. The most important facts above given are briefly these. In the marrow of reptiles, myeloid cells (leucocytes) multiply by division of nuclei; other myeloid cells (leucocytes) grow *directly* into red corpuscles.

Among the oviparous vertebrata only two examinations were made. One of these was of the head of the femur of a healthy chicken (full-grown); leucocytes were very abundant, and, besides perfect red corpuscles, others were found small and granular. The other was of the femur and the clavicle of a canary-bird which had died of a slow, wasting disease. Here were found many leucocytes and many proliferating myeloid cells; red corpuscles were very scarce.

To pass on to the mammalia. Six observations on the marrow of the spongy bones of the ox and dog, agreeing in their results, may be described together. Twice the marrow was fatty, and each time nothing was observed appearing to bear any part in blood-formation; nothing, in fact, but free oil-globules and cells containing large and small oil-globules. In the other four, myeloid cells, *i.e.* large and modified leucocytes, were seen to contain each a perfect, or a granular, red corpuscle. Notice that the myeloid cell *contains* a red corpuscle; not that which simulates a red corpuscle. For it not only possesses the proper color, but also presents the characteristic changes of aspect with changing focus. When the wall of the myeloid cell is broken by reagents, and the contained corpuscle has escaped, it is no longer distinguishable from its fellow red corpuscles.

In the head of the humerus of one gopher there was found an abundance of leucocytes, and a varying size for the red corpuscles. In the human species two examinations were made of the marrow of the foetus, in each instance at about the sixth month. In one, the myeloid cells were found to contain, individually, a red corpuscle, and the red corpuscles to vary in size. I hope I may not be misunderstood as meaning that more than a small proportion of *all* the myeloid cells showed any

signs of a contained red corpuscle; but those which did have any had one each. In the other fœtus the above conditions were not noticed; but nucleated red corpuscles were found in the marrow, being absent from the blood of the rest of the body. The significance of this fact will be more advantageously considered further on. Only one adult man furnished specimens. These were an apparently healthy humerus and a carious ulna, amputated by Dr. A. J. Stone, and kindly sent me for examination. In the humerus, besides leucocytes and red corpuscles presenting no features of importance, masses of hæmatine, and fat-crystals stained wholly or in part with hæmatine, were found. In the carious ulna, as might have been anticipated, the blood pressed from its spongy structure gave no evidence of active changes.

In all these observations the abundance of myeloid cells, and the analogy between certain of these myeloid cells and the white corpuscles of the blood, render the production of the latter out of the former by a change of site and function a matter of great probability. The presence in the marrow of the reptilia of cells not typical of any fixed forms, and perfectly inexplicable except as transition-stages between leucocytes and red corpuscles, assures us of the formation of red corpuscles in this situation. This assurance is redoubled by the presence in the marrow of the mammalia of myeloid cells containing a typical red corpuscle. Again let me insist on this inclusion of red corpuscles by myeloid cells. The existence of nucleated red corpuscles in the marrow of the fœtus after they have disappeared from the rest of the body likewise shows blood-changes going on in this situation. In the apparently healthy human arm-bone examined, many masses of hæmatine and some fat-crystals stained with hæmatine were found, but no collections of leucocytes or transitional forms. As in none of the observations on healthy bone anything was seen which would appear to indicate an active retrograde metamorphosis of the red corpuscles in this situation, if we may reason at all from one case, this one would seem to indicate a diminished formative force in the myeloid cells, which had allowed the material sent them for elaboration into higher forms to degenerate into lower. That the vitality of this humerus was not high is certain from the general worn-out appearance of the man, and the death, one by one, of many of the bones below it in the forearm and hand.

Before caries of a bone declares itself, we generally find the patient anæmic and feeble in a marked degree. Why? Perhaps because the marrow of the spongy bones all over the body has suffered a diminution of its vitality, which has limited its blood-making power, and at length in some bone whose powers of resistance are less than the others, the diminution of vital force passes beyond the abrogation of function and only rests at the death of the part. This view gains strength by the fact that some bones, or parts of bones, are peculiarly liable to caries in the different diatheses, and that such parts are those in which there is the most abundant accumulation of spongy structure containing the blood-making marrow. Of course the anæmia and debility found during the separation of the dead bone are largely produced by the irritation and drain attendant on that act.

By a reference to the papers of Neumann and Eales it will be seen that from their observations, made exclusively on mammals, principally rabbits, they consider the leucocyte to be transformed in its entirety into a red corpuscle. The former states this less distinctly than the latter, who elaborately runs through the description of a series of transitional forms, without, however, carrying the conviction that his series is a natural one, or that its members in all instances bear any relation to one another. That in reptiles the leucocytes of the red marrow, or myeloid cells, are converted entire into red corpuscles, all my observations go to prove;

but that in mammals the red corpuscles are formed *within* myeloid cells they go equally to prove. Therefore it will be seen that with the German observers I fully believe in the birth of red corpuscles in the marrow, but differ widely from them as to the *way* in which the leucocyte of mammals produces a red corpuscle: they holding that the whole leucocyte is transformed into the red corpuscle; I, that only a part is involved in the transformation. That Neumann saw the same forms as myself is proved by the fact that he compares them to forms found in the blood of frogs, and to the nucleated red corpuscles of embryos; but he does not seem to have grasped their true significance in the physiology of blood-corpuscle formation, nor to have realized their proper situation in the progression towards the highest form, the red non-nucleated corpuscle of mammals.

In tracing the transitions of blood-corpuscles, let us begin as low in the scale of organization as insects, in whose blood, ordinarily, nothing higher than leucocytes is found. These contain from one to several nuclei, which often resemble leucocytes except as to size. By this it would appear that the leucocytes of the blood of insects have the power of multiplying in the current of the circulation by division of nuclei. In common with other observers, I have occasionally seen leucocytes in the blood of insects which possessed a faint uniform reddish tinge. Ascending to the order of reptiles, we find in their blood not only leucocytes but also red corpuscles, large, oval, and nucleated. If we view the transitional forms met with in the marrow, we see such gentle gradations from an ordinary leucocyte up through larger leucocytes, and large leucocytes faintly colored, and small homogeneous red cells, and larger red cells with contents condensing towards the centre, until finally the perfect nucleated red corpuscle is reached, that we find it impossible to say where the leucocyte has ended and the red corpuscle has begun. Here, as in the insect, the leucocytes have gained a reddish hue; but here, as in consonance with the higher organization, they have advanced beyond the mere condition of colored leucocytes. Here, too, the changes no longer take place in the circulation, but the leucocytes engaged in the process are myeloid cells; also the leucocytes of the circulating fluid have ceased to multiply, and rely for reinforcements on extraneous sources. Notwithstanding these differences, as in insects, the leucocyte gives origin to the red corpuscle by a transformation of its *entire* structure.

In the higher organism of mammals we find that myeloid cells (leucocytes), instead of growing into red corpuscles, give them origin within their walls, an endogenous formation. In this position the red corpuscle appears as the nucleus of its myeloid cell. Therefore, the perfect, non-nucleated red corpuscle of mammals having acted as nucleus to a leucocyte, and the nucleus of the reptilian red corpuscle standing in nuclear relations to that which was once a leucocyte, the mammalian red corpuscle is analogous to, if not identical with, the nucleus of the reptilian red corpuscle.

A human fœtus was mentioned above in which nucleated red corpuscles were found in the marrow after they had disappeared from the rest of the blood. Why? The marrow may have contracted the habit, so to speak, of forming the nucleated red corpuscles of earlier fetal life, and, still clinging to that habit, forced the whole, or a part, of the present red corpuscles, which should be non-nucleated, to pass through the nucleated form from which by simple rupture of the enclosing wall they might emerge as the perfect non-nucleated corpuscle. As will be seen, the above explanation, as to the part or the whole of a leucocyte being active in producing the red corpuscle, agrees partly with that given by Wharton Jones and Bennett, and partly with that given by Paget and others.

That little or nothing has been said of the so-called blood-making glands is not to be taken as evidence that their activity is disclaimed, except in so far as another source of supply necessarily lessens the demand upon them; and if that other source of supply be proved adequate to the demand, we may come to consider those glands as nearly or quite useless in that respect.

DOUBTFUL CASES.

BY JOSEPH R. BECK, M.D.,

Fort Wayne, Ind.

I HAVE now on my case-book two cases of disease, exactly alike in every essential particular, and partaking of the nature of "doubtful cases" so much as to induce me to place them on record for the profession, in order to elicit any information concerning them which can be had; and if any one can contribute to my enlightenment, I shall feel very grateful therefor.

My first case came under my observation in February, 1867, and is described in my case-book as follows:

February 3, 1867, B. J., male, aged twenty-seven, unmarried, remarkably stout and healthy, but is somewhat troubled, as he phrases it, "about the condition of his water-works."

He states that he had been keeping a mistress for nearly three years, and that he never had any difficulty until after cohabiting with her for the last time, two weeks ago, when he says he became convinced during the intercourse that something was wrong with the woman. He now presents himself with complete phymosis, accompanied by a most intense itching about the frænum of the prepuce. On examination I find that there is considerable induration in the cellular tissue situated between the skin and the mucous lining of the prepuce; but there is no sign of an ulceration anywhere, neither is there any discharge from the urethra, and he states that there has been none from the start. The itching is intense, and at times almost intolerable, but there is no evidence of the slightest congestion present anywhere.

I at once performed the operation of circumcision, and the wound healed up in the kindest manner inside two weeks' time, with the use of the cold-water dressing. There was nothing present after the operation to account for the excessive sensitiveness of the parts, and the itching symptom remains to this day a mystery to me. The slight loss of blood seemed to act beneficially, inasmuch as the itching disappeared within a few hours and never returned. Now comes the dénouement.

On the 10th of February, just seven days after being operated upon, my patient returned, complaining of a sore throat. A most careful examination failed to show distinctly and clearly a syphilitic throat, but upon looking at his body for any signs of eruption I found about twelve spots, crusts, upon the skin immediately over the sternum, and circumscribed by a line which, if drawn, would perfectly outline that bone. Fearing syphilis, yet not by any means positive of its existence, I placed him upon the protiodide of mercury in pill. He took this, in connection with an occasional dose of iodide of potassium, until the spots had completely disappeared, *leaving not a trace*. This had been effected by the 23d of the month, and in the mean time the sore throat had disappeared.

On the 23d, as stated, I saw him, and regarded him as cured. On the 1st of March he returned, complaining that he was losing his hair and beard, and that his finger- and toe-nails were coming off. I ordered him to cut his hair close, shave his face, and keep his nails cut short, but gave no medicine of any kind. By the middle of April he reported that his hair had stopped falling, that his beard was again growing luxuriantly, and that a new outgrowth of nail had nearly pushed the old ones from his fingers and toes.

He was at this time engaged to be married, and consulted me particularly with reference to the propriety and safety of

such a step. Declining an answer for a few weeks, I immediately communicated with a deservedly eminent authority in Philadelphia, detailing the case as here related, and asking his advice. (His letter has been mislaid, or it would be introduced here.) He seemed substantially to look upon the projected marriage as rather dangerous; and, acting upon this suggestion, I advised a postponement of marriage for one year at least. This was not agreed to, and the parties were married in September, 1867. J——'s wife has borne him two healthy children, and he has never experienced the slightest trouble from the old affliction. I saw him last in June, 1871, and he was, if anything, stouter than ever.

I have been thus explicit in the statement of this case in order that the second one may be very brief; and, since the statement applies almost equally well to both, we shall thus avoid the tiresomeness of repetition.

I had, of course, never entirely ceased to speculate as to the probable cause of this trouble, but had permitted my mind to forget the circumstances somewhat, and, feeling that the case was to a certain extent an anomalous one, had ceased to think much more of it. It would, in all probability, have never seen the light but for the occurrence of a second case, precisely similar in the inception, progress, and decline of the attack. I again refer to my case-book for accurate data.

On the 20th of September, 1871, came Jacob G——, German by birth, laborer, unmarried, aged thirty years, stout and able-bodied, who stated that, while working in Chicago about two weeks ago, he cohabited with a prostitute, and within three days from the time of the intercourse he noticed a swelling of the prepuce, amounting to twice its volume, and accompanied by an intense itching. There was no pain, no discharge, no groin-trouble,—nothing, in fact, but the swelling and the itching. This latter symptom he described as being almost unendurable, and said that nothing gave him any relief. On examination I found the same indurated state of the prepuce as in the former case, and phymosis so complete that a medium silver probe was with difficulty passed.

I immediately circumcised him, and carefully examined the mucous membrane of the prepuce for any abrasion. This examination, although made by the aid of a magnifying-glass, failed to show the least thing wrong anywhere, not any evidence of congestion being present. The wound healed in due season, and the case presented successively the same train of symptoms that were noticed in the former one. (A description here is deemed unnecessary.) He was discharged, cured, on the 9th of November, 1871, after undergoing substantially the same treatment as the first case.

Now, these were cases of what disease? Certainly not gonorrhœa, nor any other purely local trouble. If syphilis, the symptoms developed in a remarkably short time, and without any chancres. Therefore they were *probably* not cases of syphilis. It certainly was in each case a constitutional trouble; else why the loss of the hair and nails? That there existed a specific poison, and that this poison simulated that of syphilis, there can be no doubt; but who ever heard of syphilis without chancres?

I have no theory to offer, but present the cases for record just as they are.

[Admitting that both the patients whose histories are given above were affected with syphilis,—and this seems to us the most probable view,—it is not impossible that the primary sore escaped detection because seated in the urethra. In other words, the disease in each case may have depended upon a concealed or urethral chancre. —ED.]

CONIA MADE BY SYNTHESIS.—M. Hugo Schiff has succeeded (*Bulletin Général*, October 30, 1871) in making a substance having many of the qualities of conia, by causing butyric aldehyde to react with ammoniacal alcohol (spirit of ammonia) at a temperature below the boiling-point.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

CLINIC FOR DISEASES OF THE SKIN.

SERVICE OF DR. LOUIS A. DUHRING.

Reported by Dr. ARTHUR VAN HARLINGEN.

SEBORRHŒA CAPITIS.

T. W., aged 60, English. The disease with which he is affected was formerly called pityriasis, signifying a branny or scaly disease; more recently it has been termed alopecia furfuracea, in consequence of the pearly scales which are thrown off by it. A better name is the one at present generally used,—seborrhœa, which is founded on the pathological feature of the affection, namely, the excessive secretion of sebum.

It frequently happens that the individual affected with this complaint is entirely unaware that he is suffering from a disease of the scalp until his hair begins to fall out.

Such was the case with this patient, who has suffered probably for years with seborrhœa and falling of the hair, without attempting to have the disease remedied, and, indeed, unaware that he was affected by any serious ailment.

An examination of the head will show that the scalp is covered with fine branny and pearly scales, in some places imbricated, in others loose, and most abundant over the parietal region on either side. In the young, itching is the most prominent symptom; while in those who are older, falling out of the hair is often the sign most noticed.

Seborrhœa, pathologically considered, consists of a vitiated condition of the sebaceous follicles, causing them to pour out an increased quantity of their peculiar secretion. This, mingled with epidermic scales, becomes deposited upon the surface in pearly laminae, as in the case of the patient you have just seen. Seborrhœa is not confined to the scalp, but is found also on the forehead, back, genitalia, and other localities. When occurring upon the body its treatment is somewhat different. At present I shall speak only of seborrhœa capitis.

The first thing to be done in these cases is to remove the masses of desiccated sebum and epidermis. This is accomplished by saturating the hair with olive oil, retaining it on the head overnight, and then washing thoroughly with the following:

R Saponis viridis, \mathfrak{z} iv;
Alcoholis, \mathfrak{f} ij. Misce.

This preparation is known as spiritus saponis kalinus.

As the amount of secretion on this man's head is not great, we will dispense with the use of oil in his case, and simply direct him to apply the spirit in the following manner. He is to take a small flannel rag, wring it out in hot water, and pour upon it about a teaspoonful of the spirit, which he will rub into his head, adding a small quantity of warm water from time to time, so as to form a lather. This "shampooing" process is to be continued for ten minutes, when the head may be washed with pure water and thoroughly dried.

The application as just directed is to be made morning and evening, and may have to be continued for some time. When the scales have been entirely removed, we shall order some such mixture as the following oil:

R Acid. carbolici, \mathfrak{ss} ;
Ol. ricini,
Alcoholis, \mathfrak{aa} \mathfrak{f} ij. Misce.

Sig.—Apply after washing.

The object of this application is to relieve the dryness and contraction of the skin and hairs resulting from the use of the spiritus saponis kalinus.

ECZEMA RUBRUM.

M. A. C., Irish, domestic, aged 45. We have here one of the most common of skin-diseases. The case before us has not yet been put under treatment, and shows well the appearance of a mild form of this variety of eczema, accompanied by weeping or running. The disease is more common among women than among men, and occurs most frequently in persons above middle age. When it presents itself on the leg, it is very apt to be connected with varicose veins. None appear to exist here. In the present instance the disease is

dependent on the state of the patient's health, which is far from good.

The treatment will be twofold. The internal remedies we shall use are iron and cod-liver oil, together with a generous diet. As regards external applications, we may make use of a mixture of olive oil and lime-water, applied twice daily after thoroughly washing the part; or we may employ the treatment I usually adopt, which consists in thoroughly rubbing the diseased portion of the skin with *sapo viridis*, and, after washing this off, applying unguentum *diachyli* thickly spread on strips of linen. When unaccompanied by varicose veins, this form of eczema is curable when proper treatment is employed.

ECZEMA PALMARIS ET PLANTARIS.

J. A., aged 50, porter. This eruption, the patient states, is of about one year's duration. You see that it involves the palm of each hand, and that it is scaly, with a tendency to fissure and bleed. The eruption, as usual in these cases, involves the feet as well as the hands; and sometimes it happens that when the former are better the latter are worse, and *vice versa*. Such is the case in the patient before us. When chronic, the severity of the symptoms varies greatly with the seasons, the rule being that this form of eczema is worse in winter than in summer. The tendency to fissure gives rise to great pain, occurring as it does at points where the motion of the skin is most constant, and where it is most exposed to stretching and rubbing.

It is important to arrive at the diagnosis of these cases from actual inspection and examination. This is the most essential thing to learn in the study of cutaneous diseases, being of far greater consequence than the treatment. It is an art arrived at only by close study of the appearances which the skin itself presents. There is a syphilitic form of disease of the hands and feet, often incorrectly termed syphilitic psoriasis, which resembles in many respects the affection before us. The appearances, together with the itching which is quite prominent in the case before you, are sufficient to enable us to determine that the disease is in no way connected with syphilis. In fact, we have here a case of eczema squamosum; and a peculiarity of this variety is that it scarcely ever forms vesicles, nor is it attended with the weeping or oozing of viscid fluid. The skin cracks open in places, and shows beneath the red surface of the corium, but no moisture.

This man was ordered, a day or two since, the following:

R Picis, \mathfrak{z} j;
Adipis, \mathfrak{z} j.

Misce, et ft. unguent.

Sig.—Apply morning and evening after washing.

The relief produced by this application has been decided, and we shall continue it for the present.

HERPES IRIS.

The affection before us is quite a rare one. It usually occurs during the spring or autumn, and the present case is somewhat exceptional in this respect. We have here vesicles, not like those of eczema, but larger, and resembling rather the eruption of herpes zoster and herpes labialis, to which class of diseases the one before us belongs. The name given to this affection, herpes iris, refers to the mode of its occurrence, in concentric rings spreading from the original point of eruption; also with reference to the shades of color which it shows at times. It should not be confounded with herpes circinatus (tinea circinata), which is of parasitic origin. The affection runs an acute course, commencing usually with a slight febrile attack, and lasting several weeks. The eruption is apt to appear in successive crops of large distinct vesicles on an inflamed base, running a course similar to that of herpes zoster.

The patient has been annoyed off and on with the disease for the last nine years; and, contrary to its usual custom, it has occurred with him in summer and midwinter. The rest of the year he is quite free from anything of the kind. This affection is not usually a troublesome one; and I question if this man would have sought relief had not the eruption appeared on his hands and disabled him from work.

The disease is spontaneously curable. Under ordinary circumstances, some tonic aperient may be used as a preventive against successive crops appearing.

EPISCOPAL HOSPITAL.

SERVICE OF JOHN H. PACKARD, M.D.

Reported by Dr. WILLIAM H. BENNETT, Clinical Clerk.

FRACTURE OF LEG IN A PREGNANT WOMAN—PERFECT CURE.

M. M., a healthy, well-built woman, forty years of age, was admitted July 4, 1871. The day before, being at the time seven and a half months gone in pregnancy, she was walking, with a child in her arms, over an uneven lot made slippery by the rain, when she slipped and fell, her foot turning under her. After her admission, ether was administered, the fracture reduced, and the leg placed in a fracture-box.

For a few days an evaporating dressing of lead-water and laudanum was applied to the part. About the fifth day after the accident the fracture-box was suspended by means of a frame, and the patient allowed to sit up in her bed.

At the end of the tenth day there was evident union of the fragments, and they were in good position. At the end of the fifth week the leg was removed from the fracture-box, and pasteboard splints were applied. The union was now firm and the position of the fragments excellent. A few days afterwards the patient was encouraged to walk, at first with assistance and then without it. She was discharged, with a sound leg almost entirely free from deformity, on the 15th of August. On the evening of the 17th she gave birth to a healthy boy, after a labor which, according to her own account, was easier than her former ones.

This case goes to prove the correctness of the accepted view that pregnancy exerts no special influence on the union of fractures, unless by reason of the debility induced by some of the symptoms incidentally associated with it. (See Malgaigne, *Traité des Fractures*, etc., tome 1, p. 141; American translation, p. 123.)

COMPOUND FRACTURE OF LEG TREATED BY SUSPENSION IN THE FRACTURE-BOX—RECOVERY.

W. G., a young man, twenty-three years of age, previously in good health, and of temperate habits, was admitted July 15, with a compound fracture of both bones of the right leg, which had been caught between the bumpers of two coal-cars. The tibia was broken near the junction of its lower and middle thirds, very obliquely. Two wounds—one on the inner and the other on the outer side of the limb, each large enough to admit the little finger—communicated with the fracture.

Owing to the degree of obliquity of the fracture of the tibia, it was impossible to prevent a slight projection forwards of the upper fragment. The leg was placed in a fracture-box and surrounded with bran. The external wounds soon scabbed over, and although during the first month they were twice opened accidentally, giving exit to a slight discharge, yet the fracture practically resolved itself into a simple one. At the end of the first week, suspension of the fracture-box was employed. In order to facilitate the dressing in this position, the iron framework was used, which allowed the box to be opened and the dressing accomplished without lowering the limb or in any way interfering with the suspensory apparatus. The patient had not a single unfavorable symptom; on the 24th of August the external wounds were healed, and the bony union was sufficiently firm to allow the limb to be removed from the fracture-box and pasteboard splints to be applied. He was discharged, cured, September 22, having been sixty-nine days under treatment. There was a little prominence of the upper fragment, and slight shortening.

COMPOUND FRACTURE OF LEG, NECESSITATING AMPUTATION—RECOVERY.

M. L., æt. twenty-four years, a young man of good health and habits, was admitted July 22, 1871, with a compound comminuted fracture of both bones of left leg. While driving a horse attached to a coal-car, his foot was caught in the track, and to avoid severer injury he lay down with his leg across the rail. The wheel passed over it just above the ankle, almost severing the foot. When admitted he was suffering much from shock, but soon reacted. Ether was administered, and amputation performed about the middle of the leg by a double-flap operation. He promptly reacted, and did well.

Owing to the contused condition of the parts, the flaps sloughed, but the wound rapidly filled with healthy granulations, which covered in the bone. The ligatures came away promptly and without trouble. On August 5 (fourteen days after the operation) the sloughing of the posterior flap caused a small cutaneous arterial branch to give way, but the resulting hemorrhage was readily stopped by applying a compress covered with powdered alum. A second hemorrhage occurred from near the same spot about four hours afterwards, but was checked with equal facility, the patient losing in all about eight ounces of blood. From this time onward the progress of the case was an uninterrupted convalescence. By the 15th of August there remained simply a healthy ulcer, and the patient was able to ride about in a chair. He was discharged September 19, with a spot about the size of a dime still unhealed.

WILLS OPHTHALMIC HOSPITAL.

SERVICE OF GEORGE C. HARLAN, M.D.

Reported by CHARLES K. MILLS, M.D.

DESCENDING NEURITIS.

H. Y., æt. 38, a widow, having no children, previously in good health, ten days before admission had a violent pain in the top of the head, and was troubled with nausea. The next day the headache was more intense, but felt most over the left brow. The sight of the left eye was dim, and there were "stars flashing before it." The dimness of vision continued to increase up to the time of her admission to the hospital, November 11, 1871, when it was reduced to merely quantitative perception of light: she could not count fingers held close before the eye. The headache and nausea continued. The external appearance of the eye was in all respects normal, except slight dilatation and sluggishness of the pupil. Vision in the right eye was normal.

By ophthalmoscopic examination of the left eye, the disk was found to be congested, and slightly swollen, and its margins indistinct. The central veins were enlarged. The retina appeared quite normal, except a haze immediately around the disk.

She was put to bed in a darkened room, footbaths were ordered, the artificial leech was applied to the temple and the application repeated several days in succession, morphia was injected subcutaneously into the temple for the relief of the intense frontal pain, and half a grain of calomel was given every two hours. When slight salivation was produced, the calomel was discontinued, and iodide of potassium was ordered, ʒss a day. The eye was kept constantly under the influence of a strong solution of atropine, applied several times daily.

A slight improvement was noticed the second day after admission, and she continued steadily to get better until the time of her discharge, December 9, when she could read with ease No. XXX. of Snellen's type at twenty feet, and the ophthalmoscopic appearances were nearly normal.

Four days after her discharge, December 13, she came to the hospital dispensary on account of her right eye. She had had slight headache for three days; but for the last two days the headache had been severe, and accompanied by nausea and "flashing of red and blue stars before the eye." Her vision in this eye was still $\frac{20}{XX}$; but the letters appeared slightly less distinct and clear than before.

She was readmitted to the hospital, but was not prepared to come in until the next day, December 14, when she complained of having had violent pain in the head and eye during the night previous, and was still suffering considerably. In twenty-four hours the vision had diminished from $\frac{20}{XX}$ to $\frac{10}{CC}$. She could distinguish colors readily. Ophthalmoscopic examination revealed much the same appearances as had been found in the other eye when she first came for treatment. Her gums were still spongy from the effects of the calomel, and she was still taking iodide of potassium.

The same treatment as before was ordered, except that the mercurial vapor bath was substituted for the internal admin-

istration of calomel, and bark was given. Her diet consisted, as previously, of beef-tea and milk.

December 18.—She still had much pain in the eye and head, and slight nausea, and her bowels were constipated. Vision was entirely gone; there was no perception even of the bright light reflected from the ophthalmoscopic mirror. The disk was more congested and oedematous, its inner margin scarcely discernible. Mercurial inunction was now substituted for the vapor-bath, and she was ordered a mercurial purge, and a blister to the nape of the neck.

December 20.—She could count fingers with some difficulty. She began to distinguish light on the 19th. No very decided changes in the ophthalmoscopic appearances could be discovered.

January 8, 1872.—Vision had improved gradually, and she could read No. LXX. Snellen at ten feet. She is still under treatment.

Dr. Harlan considered the pathology of this case obscure. A careful examination of the urine revealed nothing abnormal. She had not menstruated at all for two years, although prior to that time she had always been perfectly regular. At the period for the return of the catamenia she had experienced slight nausea and discomfort only. No syphilitic taint could be traced in the present symptoms, or in the patient's history; but the apparent response to "antisyphilitic" treatment pointed in that direction. The absence of color-blindness, on the other hand, was opposed to this view, as it is thought to be rarely, if ever, wanting in syphilitic disease of the nerve or retina. Galenzowski, particularly, in a recent article in the *Archives G n rales*, lays great stress on this symptom. It could only be determined that the disease of the nerves originated within the cranium, and descended towards the retina, which remained unaffected except immediately around the disk.

TWO CASES OF PUNCTURED WOUND OF THE EYEBALL.

J. Y.,  t. 21, a stone-cutter, was struck in the eye with a small piece of steel from a chisel. He came for treatment twenty-four hours after the injury, when it was discovered that the steel had penetrated the cornea and lodged in the lower and outer part of the iris.

A segment of the iris containing the foreign body was removed. Ice cloths were applied and rest enjoined. The eye did well until the night of the second day, during which it was attacked with violent pain, and the next morning the anterior chamber was found filled with blood, and vision lost. A strong solution of sulphate of atropia was used in the eye, and the artificial leech applied to the temple.

The blood was rapidly absorbed, but when, three days afterwards, it had disappeared, another hemorrhage occurred. The treatment above given was repeated, and in two weeks he was able to leave the hospital. He attended the dispensary service for three weeks after the iridectomy, when the conjunctiva was but slightly injected, all the media were clear, and he had a vision of $\frac{20}{300}$ with the stenopaic apparatus. He was directed to return to the hospital, but has not been seen for four weeks.

G. C.,  t. 15, was struck in the left eye with a shoemaker's awl, which penetrated the upper and inner part of the eyeball at the sclero-corneal juncture, and passed through the iris about halfway between its pupillary and attached circumferences. The instrument was immediately withdrawn; the patient, experiencing little trouble, did not come for treatment until two days after the reception of the injury.

His vision was found to be normal. No iritis or conjunctivitis had ensued; there was no prolapse, but apparently a slight adhesion of the iris to the anterior capsule at the point of penetration, causing a decided distortion of the pupil, which was pyriform in shape. The lens was uninjured. He was treated by the instillation of an eight-grain solution of sulphate of atropia, and in a week the pupil was nearly regular, vision still normal, and no bad symptoms of any kind had supervened.

INJECTION OF ALCOHOL INTO SEROUS CYSTS.—M. Monod (*L'Union M dicale*, October 30, 1871) has called the attention of the Soci t  de Chirurgie to the use of alcohol as an injection in hydrocele and in other forms of serous accumulation.

THE ORIGIN OF FIBRIN.—P. Mantegazza (*Centralblatt*, No. 45), for the purpose of deciding some points in dispute in regard to the composition of the blood of the splenic vein, performed several experiments on dogs. In the majority of the experiments the blood of the splenic vein was found to contain more fibrin and fewer corpuscles than that of the jugular vein; but in almost as many instances the proportions of these substances were reversed, or the composition of the blood of the two veins was exactly the same. The spleens of three rabbits were excised; but the operation seemed to have no perceptible influence upon the amount of fibrin in the blood. The injection of a solution of urea into the blood of rabbits and of dogs was followed by the disintegration of a large number of blood-corpuscles, and, if the animal survived for some days after the operation, by a marked increase in the amount of fibrin,—in one case nineteen parts in a thousand. Lactic acid was also injected into the blood of several animals. Its effects varied according to the amount injected and the concentration of the solution. They were also not the same when it was introduced into the peritoneal cavity as when it was injected into the veins. In the former case, peritonitis and enterocolitis were the local results; and these may prove fatal. In both cases, congestion and inflammation of the lungs, inflammation of the kidneys, and h maturia, as well as reddening and swelling of the endocardium, were produced. In the case of a dog, symptoms of articular rheumatism, with endocarditis and fever, were observed. Valvular lesions were never noticed. The blood-corpuscles were diminished and the fibrin increased. In the blood of animals poisoned by lactic acid, clear bodies of different sizes, presenting in some cases a diameter of $\frac{1}{1000}$ mm., were seen. They were semi-transparent, and were composed of fibrin and white blood-corpuscles. It is not improbable that these give rise to embolism, and, consequently, to inflammation of the lungs. Mantegazza has not observed any increase in the amount of fibrin in the blood of animals to which the induced current has been applied or in which convulsions have been induced. The examination of the blood of persons who have died of tetanus has yielded the same result; and while in some cases the blood of parts subjected to violent movements has been found to show an increase of fibrin, in others it has contained less fibrin than the blood of parts at rest.

Mantegazza is of the opinion that the coagulation of the blood and of the coagulable fluids depends upon a condition of irritation of the white blood-corpuscles, which, when in contact with foreign bodies or inflamed tissues, or when removed from their physiological influences, emit a substance which is either fibrin or is the substance from which fibrin is formed. The red blood-corpuscles are not at all necessary to the formation of fibrin. Lymph and inflammatory serous effusions which do not contain them are capable of coagulation; but every coagulable liquid must contain the white blood-corpuscles, and will not coagulate when these are mechanically removed. Sussana attributes the relatively greater amount of fibrin in the arterial blood than in the venous to the fact that just before the venous blood enters the heart it receives from the thoracic duct a large number of colorless blood-corpuscles. In many conditions where an increase in the amount of fibrin is observed (pregnancy, digestion, the blood of the splenic vein), an excess of the white corpuscles may also be detected. And wherever in inflammation the white corpuscles accumulate, there fibrin will also be found.

CHLORAL IN TETANUS.—M. Garnier (*L'Union M dicale*, November 14, 1871) refers to several cases in which chloral was used in the treatment of tetanus occurring in very young persons, and says that it is in such patients that it will be found most useful. In a child thirteen years of age four grammes of chloral were given at a dose, with the effect of producing a marked amelioration of all the symptoms. A complete cure was effected on the thirty-fifth day, after one hundred and eighty grammes had been taken. In a child aged seven days, affected with trismus, chloral was dissolved in the milk of the mother, and injected into the child's nose during the paroxysms. Twenty-five grammes were thus administered, and on the ninth day the cure was complete.

CAMPBOR IN PHAGEDENIC CHANCER.—M. Baudoin reports (*Gaz. des H p.*, Sept. 16, 1871) three cases of this disease successfully treated by the application of camphor in powder.

PHILADELPHIA
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THURSDAY, FEBRUARY 1, 1872.

EDITORIAL.

NURSING IN HOSPITALS.

THE recent numbers of the London *Lancet* contain a series of articles on the subject of night-nursing in the London hospitals, which we cannot but regret are not likely to be so generally read as they deserve to be by all those who are interested in hospital management in this country. The information which is conveyed through the pages of the *Lancet* was obtained by making night visits to the various London hospitals and workhouses between the hours of 9 P.M. and 2 A.M., the officers of the institution being in no case apprised of the exact time of the visit. It has always struck us that too much was expected of the nurses of the hospitals in this city, and that this was especially true of those on night duty; and this impression has been confirmed by the facts contained in the papers alluded to. It would be impossible to reproduce them in full in this journal, and we must, therefore, content ourselves with making a few abstracts from them. Taking, for instance, the last *Lancet* which has come to hand, we find accounts of night visits to the Marylebone Workhouse, St. Mary's Hospital, St. George's Hospital, Westminster Hospital, and University College Hospital. We shall for the present omit any reference to the Marylebone workhouse. The St. Mary's Hospital contains one hundred and sixty beds, and the nursing staff numbers twenty-five persons. There are seven Sisters, eleven day nurses, and seven night nurses. At the St. George's Hospital, where there are three hundred and fifty-three beds, the nursing staff numbers seventy persons. There are thirteen head-nurses, twenty-four assistant-nurses, twenty-one night nurses, and ten probationers. The Westminster Hospital contains about two hundred beds. The nursing staff consists of the matron, six Sisters, and sixteen nurses, seven of whom are night nurses, so that each nurse has the charge, on an average, of thirty patients; but for cases requiring extra attention special nurses are provided. The University College Hospital contains one hundred and fifty beds, and the nursing staff consists of a Sister Superior, who has entire control, and is assisted by five Sisters and twenty-three nurses and probationers. There are eleven nurses on night duty.

No hospital in Philadelphia is provided with so large a nursing staff as are these London hospitals, in propor-

tion to the average number of its inmates; but the disproportion is especially noticeable in the number of nurses on night duty. In most, if not all, of the hospitals of this city not only is a much larger number of patients under the care of one night nurse, but he is frequently compelled to leave one ward to the care of a convalescent patient while he visits another in a different story or, it may be, in a different building. The head day nurses sleep, however, in a room adjoining the ward of which they have charge, and are required to assist whenever a case of recent accident is admitted to the hospital or whenever an emergency arises.

Unquestionably, the high price which labor commands in this country renders it impossible for any hospital to have so full an equipment of nurses as is usual in England, especially since the nursing of male patients in American hospitals is done almost exclusively by men. If it were possible to substitute female for the male nurses, the nursing staff of a hospital might be very much increased without adding to its expenses, since the former do not receive as much wages as the latter; but there is now much greater difficulty in procuring good and reliable nurses for the women's wards than for the men's, and this difficulty would, of course, be very much augmented by anything which would lead to an increased demand for female nurses. It is perhaps one of the most deplorable results of our social system that no woman who looks forward to the possibility of marrying can be induced to adopt any occupation as a profession for life, and, of course, young women who can gain their livelihood in other ways are not likely to take to nursing. Consequently, the women who seek positions as nurses are generally advanced in life, and are very frequently widows, who take them simply because they are qualified for nothing else.

The Nurses' Home in this city affords, it is true, an opportunity for women to become familiar with the duties of the lying-in room; but women who can earn from nine to ten dollars a week are not likely to become hospital nurses. These must therefore be recruited from a class little above that which does the rough work of our households; but it is certainly desirable that they too should have some preliminary training. Is it not possible, however, to interest ladies of refinement and education in the care of the sick, and to induce them to take positions as superintendents of the ordinary nurses? The establishment of nursing sisterhoods seemed to indicate at one time that there was a probability that this might take place; but experience has demonstrated that other qualities than religious fervor are needed in a nurse, and that a woman who is admirably qualified to instruct the ignorant in the principles of our faith may be woefully inefficient, if not positively neglectful, as regards everything connected with the physical well-being of the patients committed to her care; and we have no hesitation in saying that it would be better for the lady superintendents not to be connected with any religious organization. In England the introduction into some of the hospitals of a

large number of Sisters, who are independent of the hospital and are not amenable to its rules, has been the occasion of a good deal of trouble; and it would give rise to many disagreeable complications here. In one of the hospitals of the city the ladies connected with a religious institution have often rendered valuable services simply from Christian love to their neighbors, but some of them have occasionally allowed their zeal to get the better of their discretion in their endeavors to rescue a brand from the burning.

There are other matters in hospital management in which we think the hospitals of this country inferior to those of England; but we leave these for some future occasion.

LEADING ARTICLES.

A FEW WORDS ABOUT HOMŒOPATHY.

AMONG the laity, an impression very generally prevails that the objection of the "old school" to homœopathy is mere prejudice, and that we are only prevented by an absurd punctilio from consulting with those who practise it; and such is really the case, unless we know what the doctrines are which we decline to recognize. We do not hesitate to say that the profession should, one and all, be well acquainted with this system of quackery,—its apparently strong points, and its really weak ones.

We have no fear that familiarity with the groundwork and the current literature of homœopathy will be a source of danger to any well-educated or honest practitioner of regular medicine. At the present day, after more than thirty years, a profession composed of a large body of men of more than average education, ever in eager search for new light upon the causes of human suffering and the remedies therefor, have utterly failed to find in homœopathy anything to aid them in their battle with disease. Not one man of note in our ranks has come out and announced himself as either in whole or in part a convert to that doctrine. Not one physicist of eminence has ever given in his adhesion to its principles, or recognized it as the offspring of true science. Not one theory or fact, directly or indirectly developed by homœopathy, has worked its way into acceptance either by men of general science or by those devoted to medicine especially.

We cannot consult with homœopaths, because we have no common ground upon which to meet them in the discussion of medical matters. Our code of ethics most justly prohibits us from consultation with all those "whose practice is based upon an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry." No medical society can be compelled to admit them as members, nor can any legal penalty be enforced against those who decline to recognize and consult with them (as has recently been attempted in Massachusetts),*

except under laws so absurd as to work their own abrogation.

Homœopaths themselves—unless they are grievously slandered by report—in desperate cases turn their backs upon their dogma, abandon their infinitesimal doses, their triturations and potencies, and resort to practice which would be "heroic" if it were not too often reckless and hurtful.

We say, again, that not only honesty but interest would induce us—would compel us—to adopt whatever of truth there was in homœopathy, if it contained such an element. We assert that it cannot stand the test of impartial scientific scrutiny, and that its continued existence is owing to the fact that before its patrons such test can never be applied. It can, however, be done by every member of the profession for himself, so that he may be, instead of an ignorant and bigoted opponent, an intelligent and candid judge, of a system of quackery whose semblance of science alone raises it above other forms of charlatanism.

CORRESPONDENCE.

PHYSIOLOGICAL ACTION OF PUTTY.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

HAVING never seen a case similar to the one subjoined, I send you the following brief notes:

F. D., æt. 16 months, was troubled during October with constipation and acute strangury, making frequent attempts to void water, attended with much pain and screaming. There was no fever, the pulse was natural, tongue a little red, and the gums swollen from the imminent eruption of several teeth. On inquiry, I could find no history of previous ill health, nor had the child been troubled with worms. The symptoms being, however, suggestive of ascarides, and the child's diet very miscellaneous, including many indigestible articles, I concluded that it was a case of intestinal irritation. I administered calomel and santolin, and, the child's bowels having been opened, it became well at once; no ascarides having been voided. In the course of a few days the same train of symptoms reappeared, and continued for several days, when the same treatment was resorted to with temporary success. I then examined the child's urine, which was scanty, rather high-colored, and contained no albumen or casts, but a considerable number of very small oil-globules. On continuing the investigation, I found that the father, a painter and glazier, had for several weeks been working occasionally in the room where the child was, and had been using putty. As this was not his custom, he was able to inform me that these attacks had only followed the use of the putty, which the child had been allowed to handle and even encouraged to put in his mouth; the child had also been known to eat it. The whitening of which putty is in part composed would account for the constipation; the linseed oil, its other ingredient, gave clinical proof of its ability to cause the strangury, being also found in the urine; and, finally, the apparent cause having been removed, the child completely recovered, and is at the date of writing remarkably plump and healthy.

H. G. LANDIS, M.D.

* See the *Philadelphia Medical Times* for Dec. 15, 1871.

RUYSCH'S ANATOMICAL CABINETS.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

DEAR SIR,—So many conflicting statements have been made by authors as to the condition of the celebrated preparations of Ruysch that I am glad to be able to give the following authentic statement as a contribution to their history.

Ruysch collected two museums. The first was bought in 1717 by Peter the Great for 30,000 florins, and sent to St. Petersburg; the second was purchased after his death, in 1731, for 20,000 florins, either by the King of Poland or the Elector of Saxony. The general statement is that his preparations exist in perfect preservation to the present time (Bayle et Thillaye, ii. 85; Parsons' Anat. Prep., Preface, p. v.). Hyrtl has examined the preparations of the second museum at Leyden, Greifswald, and Prague, and found them worthless (Zerglied., pp. 592-3). The only question, therefore, was as to the Russian collection; and of this neither he nor any other author speaks from personal knowledge.

Desiring, therefore, to ascertain its condition, I addressed a note to Hon. A. G. Curtin, our Minister at St. Petersburg, and have received the following courteous reply:

"LEGATION OF THE UNITED STATES,
ST. PETERSBURG, DEC. 10, 1871.

"MY DEAR SIR,—In answer to your letter to Mr. Curtin of Sept. 20 about the anatomical cabinet of Ruysch, I have the honor to inform you that Ruysch's cabinet now forms part of the Anatomical Museum of the Imperial Academy of Sciences, and is in a good state of preservation. The greater part of the curiosities and library of Peter the Great were passed over to the Academy.

"I have delayed writing because I was promised a little book which contained some details on the subject; but so far I have not received it.

"I am, sir, very truly,

"Your obedient servant,

"EUGENE SCHUYLER."

I hope soon to obtain the volume referred to, and if it contains any items of interest I will give them to the readers of the *Times*.

Yours truly,

W. W. KEEN, M.D.

PHILADELPHIA, January 3, 1872.

ABSTRACTS.

BY ROBERT STONE, M.D.,

Irvington, N.Y.

ON HEMORRHAGE FROM THE KIDNEYS IN INFANCY AS A CONSEQUENCE OF DISEASE OF THE INTESTINAL CANAL.—In connection with the observation of Beckmann, that after severe diarrhoea in the first two months of life there are frequently found thrombosis of the renal veins and extravasations in the kidneys, Pollak (*Wien. Med. Presse*, Nov. 18, 1871) has studied the phenomena of this renal hemorrhage in twelve cases on living patients, and sums up the complex symptoms as follows: Before the blood appears in the urine, the mucous membranes take on a pale dusky-bluish color, and the skin an olive-green tinge, which latter the author explains by the change of the coloring-matter of the blood into hæmatoidin. At the same time there are also present, in the dark troubled heavy urine, slight quantities of albumen; in the sediment, blood-corpuscles, and renal epithelium. Only after twelve to twenty-four hours is blood in any marked amount mingled with the urine in such a manner that tests for hæmatin and hæmin are readily

responded to; the microscopic examination of the sediment will prevent confusion with hemorrhage from the bladder. The accompanying symptoms are great restlessness, loss of power to suckle, pain on pressure in the region of the kidneys. None of the children were over six weeks old; some were very vigorous before the accession of the intestinal catarrh; the result of the intestinal catarrh was usually a fatal one. Recovery occurred in two cases only, when the blood disappeared from the urine in three or four days. Anatomically Dr. Pollak (agreeing on this point entirely with Beckmann) asserts the integrity of the renal parenchyma itself. The treatment is limited to sustaining the strength by means of the mother's milk and decoction of cinchona: the former must be withdrawn artificially and fed to the child.

NEW METHOD FOR THE PERMANENT RECTIFICATION OF DISTICHIASTIC EYELASHES.—Schuleck (*Wien. Med. Woch.*, lxxi. 237) reports on the employment of a suggestion of Snellen's regarding the turning outward of the cilia in distichiasis. Into a fine needle a fine silk thread is drawn by both ends, so that the middle portion forms a loop. The needle is inserted close to the lashes to be rectified, and drawn out at the normal row of the lashes. The lashes are drawn, by the aid of an iris-forceps, through the loop, and by means of the latter through the track of the needle, so that they then hold their place on the outer edge of the lid in the line of the normal lashes. At one sitting Dr. Schuleck thus transplanted from six to ten lashes. These must have a certain stiffness, for very delicate cilia are difficult to raise and difficult to seize, and, besides, are easily pulled out.

RESECTION OF THE NERVUS MEDIANUS.—In this case, which is reported by Kuby (*Bayer. Aertal. Intell.-Bl.*, xxvii. 71), the operation was called for on account of a gun-shot wound of the muscles in the middle of the forearm. One opening lay on the outer side of the arm, the second at the inner edge of the brachialis internus muscle. The patient, who was wounded on the 6th of August, and brought to the Speyer hospital, was up to September 19 so debilitated by uninterrupted severe pain, and the consequent loss of sleep and appetite, that he begged for amputation. Dr. Kuby resolved upon resection of the median nerve. At the operation there was found in the nerve in the vicinity of the course of the bullet a thinned portion, and peripherically next it a knobby enlargement. This entire portion was excised to the extent of an inch. The neuralgia disappeared, and the wound had healed by the 27th of November. By May of the following year the pain had not returned; the second, third, and fourth fingers are without sensation, and the entire arm is wasted.

A CONTRIBUTION TO THE HISTORY OF THE DEVELOPMENT OF MYOPIA, BASED ON AN EXAMINATION OF THE EYES OF 4358 MALE AND FEMALE SCHOLARS.—The principal result of these observations, which were made by Erismann (*Von Graefe's Arch.*, xvii. 1, S. 1), is that a large number of early hypermetropic and emmetropic eyes become subsequently myopic. The author therefore regards the continued use of the eyes at short distances as the most frequent and most important cause of short-sightedness, and thinks that in the majority of cases this is capable of producing myopia without any congenital disposition. He ascribes also to the too long-continued and too concentrated accommodation and convergence an almost equally deleterious influence.

M. COZE has lately made a communication to the Academy of Sciences in Paris (*Gazette Médicale*, No. 48), in which he says certain effects of projectiles used in war may be explained by referring them to the principle of the transformation of forces. When the rapid motion of a projectile is suddenly arrested by an object, it is converted into heat, by which the temperature of the projectile is raised. This is precisely what happens when a ball strikes a bone and is retained in the wound. Sufficient heat may thus be generated to melt the ball, which, having first been split up into fragments, produces an extensive burn of the surrounding tissues. Undoubtedly many of the assertions made on both sides during the Franco-German war that explosive balls had been used were due simply to ignorance of this fact.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY, DECEMBER 29, 1871.

THE PRESIDENT, DR. J. H. HUTCHINSON, in the chair.

DR. O. H. ALLIS presented a specimen of *stenosis of the pulmonary artery, apparently congenital*, taken from a man twenty-eight years of age. Up to his twenty-second year he showed no signs of disease; but about this time he was attacked by measles, and six weeks later, it is alleged, by a second seizure, which was styled the "black" measles. From this time to his death the history points emphatically to cardiac disease.

A few days before his death he called in Dr. Groom, of Bristol, who, to mitigate the urgency of the symptoms, drew from the abdominal cavity thirty-four pounds of fluid. Fluid existed at the same time in both thoracic cavities and about the heart. There was a somewhat livid hue of the face, and slight cedema. General anasarca existed to a slight degree, though there was but little swelling in the extremities. A soft systolic murmur, heard most distinctly at the aortic cartilage, but diffused over the whole chest anteriorly, was present; it was not heard posteriorly. Every apex-beat caused a distinct wave to be seen over the præcordial surface.

Autopsy.—Two gallons of fluid were taken from the *abdominal cavity*. All the viscera were covered or mottled with lymph, showing an extensive but recent *latent peritonitis*, of which there were no symptoms previous to death.

Both *thoracic cavities* contained fluid. In the left, the lung was collapsed from the entire cavity being occupied by the fluids in the pleura and pericardium. The fluid in the latter was carefully measured, and amounted to $3\frac{1}{2}$ pints.

The heart weighed 17 ounces avoirdupois. The *right auricle* held 9 fluidounces. Its walls were extremely thin at some parts, and greatly hypertrophied at others. The right auriculo-ventricular opening would admit three fingers. The wall of the right ventricle was one inch in thickness. From this ventricle to the lungs there was an opening one-fourth of an inch in diameter. The left auricle was normal. The left ventricle was three-fourths of an inch thick. In this ventricle there existed a remarkable constriction just below the aortic valves, which would not readily admit the little finger, and which made the heart five-eighths of an inch less in circumference at this part than the aorta.

THE PRESIDENT, in answer to one of Dr. A.'s interrogatories, referred to a case of latent peritonitis reported by Dr. H. C. Wood in Vol. I. of the Pennsylvania Hospital Reports for 1868,—that of a man aged 20, who was brought to the hospital in a carriage, but walked from the gate to the main building,—a distance of over two hundred feet,—sat some little time in the waiting-hall, and with the assistance of a friend walked up two flights of stairs to the medical wards. There was a little tenderness on "firm pressure" on the abdomen, and typhoid fever was suspected. He died suddenly in the night, and at the autopsy the intestines and viscera were found glued together by recent lymph, the peritoneum injected and coated with coagulable lymph.

DR. H. also referred to a case presented by him to the Society on the evening of April 18, 1871, reported in the *Medical Times* for May 15 and July 15. The patient was a boy 18 years of age, suffering from albuminoid degeneration of the liver, spleen, and kidneys, whose death was directly attributable to acute peritonitis, the existence of which had not been recognized during life,—none of the usual symptoms of the disease being present. He said further that in his experience acute peritonitis occurring in the course of a chronic disease is very frequently latent.

DR. JOHN ASHHURST, JR., recalled the fact that Professor Samuel Jackson, in his lectures at the University of Pennsylvania, was in the habit of mentioning several fatal cases of latent peritonitis which he had observed in the course of his long practice.

DR. JAMES TYSON had that day made a post-mortem examination at the Philadelphia Hospital, upon a patient who

died suddenly, in whom the symptoms before death pointed to cardiac disease. Mitral disease was found present, but in addition to this were numerous patches of fresh lymph on the costal, pulmonary, and even diaphragmatic pleuræ of both lungs, together with effusion in each pleural cavity. There was also considerable peritoneal effusion. No symptoms pointed to these conditions before death.

DR. J. EWING MEARS said that he could confirm what had been said in reference to the occurrence of inflammation of the peritoneum without any symptoms indicating its presence. He had noticed in many cases of ovarian tumors coming under his observation that the operation for their removal disclosed the existence of extensive adhesions between the tumor and the surrounding viscera as well as the walls of the abdomen, without the slightest manifestation, at any time in the history of the case, of the symptoms of peritonitis.

REVIEWS AND BOOK NOTICES.

THE PRINCIPLES AND PRACTICE OF SURGERY. By JOHN ASHHURST, JR., M.D., Surgeon to the Episcopal Hospital, Surgeon to the Children's Hospital, etc. Illustrated with five hundred and thirty-three engravings on wood. 8vo, pp. 1011. Philadelphia, Henry C. Lea, 1871.

It gives us great pleasure to call the attention of the profession to this excellent work. Our knowledge of its talented and accomplished author led us to expect from him a very valuable treatise upon subjects to which he has repeatedly given evidence of having profitably devoted much time and labor, and we are in no way disappointed.

As the title indicates, the object of the author is to describe the modes of practice now generally adopted in the treatment of surgical affections, and to expose the principles upon which those modes of practice are based. This he has done as clearly and concisely as it was possible to do. He possesses all that was necessary to accomplish his object,—knowledge of what others have done and said, good judgment in selecting the best opinion and mode of treatment, and the ability to arrange his subjects well and to express his ideas clearly.

The whole work is divided into two principal divisions, treating respectively of surgical injuries and surgical diseases. In an introductory portion are considered the process of inflammation; operations in general, with the use of anæsthetics; those manipulations usually classed as belonging to minor surgery; and the various amputations. Every subject demanding it is well illustrated by wood-engravings, which assist materially, however good may be the description in the text, in the understanding of the pathological conditions or operative procedures under discussion. The index, which occupies nearly sixty pages, is one of the most carefully prepared we have ever seen.

It is our candid opinion, which we take great pleasure in thus expressing, that this treatise is, at the least, equal to any of at all similar dimensions upon the science and art of surgery; and we highly recommend it, both for the use of those beginning their studies, and of those engaged in practice who desire a work, readily consulted, that will tell them plainly, and in a few words, what is best to be done.

The mechanical execution of the book is all that could be desired; the paper, printing, and binding are excellent.

A TREATISE ON HUMAN PHYSIOLOGY; DESIGNED FOR THE USE OF STUDENTS AND PRACTITIONERS OF MEDICINE. By JOHN C. DALTON, M.D., Professor of Physiology and Hygiene in the College of Physicians and Surgeons, New York; Member of the New York Academy of Medicine, etc. Fifth Edition, Revised and Enlarged. With two hundred and eighty-four illustrations. 8vo, pp. 728. Philadelphia, Henry C. Lea, 1871.

We confess to some disappointment, on taking up the fifth edition of this popular treatise, to find it wanting in many additions which we had thought it would contain, and consider that recent advances in physiology demand. We miss more particularly any account of the recent views with

regard to the nature and formation of fibrin, the amœboid movement of the white blood-corpuscles, and its possible influence on normal and abnormal nutrition; also as regards the office of the bile in the digestion and absorption of fats; while the most recent views with regard to the histology of nerves seem also to have been but partially incorporated. With regard to fibrin, we think it has been at least determined that the old view of its being one of the constituents of living blood has been shown to be incorrect, even if the recent views of the physiological chemists as to its mode of formation are not correct. We had hoped also to see some changes in the chapter on proximate principles.

Not a few additions have, however, been made, and among the chapters which bear the marks of rehandling is that upon the glykogenic function of the liver, in which are incorporated the results of the author's recent observations on this subject, which reaffirm Bernard's views. The work is still an excellent one, and the author's simple and perspicuous style of writing will make it always a popular one.

A TEXT-BOOK OF PATHOLOGICAL HISTOLOGY: AN INTRODUCTION TO THE STUDY OF PATHOLOGICAL ANATOMY. By DR. EDW. RINDFLEISCH, O.O. Professor of Pathological Anatomy in Bonn. Translated from the Second German Edition, with Permission of the Author, by WM. C. KLOMAN, M.D., assisted by F. T. MILES, M.D., Professor of Anatomy in the University of Maryland. With two hundred and eight illustrations. 8vo, pp. 695. Philadelphia, Lindsay & Blakiston, 1871.

AN INTRODUCTION TO PATHOLOGY AND MORBID ANATOMY. By T. HENRY GREEN, M.D., London, Member of the Royal College of Physicians; Lecturer on Pathology and Morbid Anatomy at Charing Cross Hospital Medical School, etc. Illustrated by Numerous Engravings on Wood. 8vo, pp. 260. Philadelphia, Henry C. Lea, 1871.

For the first time since microscopical anatomy has become the basis of a true pathology, American students, and, indeed, we may say English students, have access to a suitable textbook in their own language. Heretofore the opportunity of studying pathology has been limited to a comparative few who were familiar with the German and French. But in the translation of Rindfleisch we have furnished us not merely an excellent guide, but actually the best which could be made available either to practitioner or student.

It would be impossible, and it is indeed needless, to present a résumé of its contents. The volume is a faithful exposition of the present state of pathological histology; each subject is fully and systematically treated, and may, therefore, be studied independently of any relation to others. With what has been said, however, an idea of the extent and completeness of the work may be obtained from the following list of subjects treated: 1. Decomposition and degeneration of tissues; 2. Pathological new formations; 3. Anomalies of the blood and the places of its formation, especially of the spleen and lymphatic glands; 4. Anomalies of the circulatory apparatus; 5. Anomalies of serous membranes; 6. Anomalies of the skin; 7. Anomalies of mucous membranes; 8. Anomalies of the lung; 9. Anomalies of the liver; 10. Anomalies of the kidney; 11. Anomalies of the ovaries; 12. Anomalies of the testicles; 13. Anomalies of the mammae; 14. Anomalies of the prostate gland; 15. Anomalies of the salivary glands; 16. Anomalies of the thyroid gland; 17. Anomalies of the supra-renal capsules; 18. Anomalies of the osseous system; 19. Anomalies of the nervous system; 20. Anomalies of the muscular system.

The work of the translators has been well done, and although a few idiomatic sentences have crept into the text which are not very intelligible, they scarcely impair the value of the work. Thus, in the Introduction, page 17, occurs the following sentence, "The period of life, that gradual growth and decay of the body, is mirrored up to a certain degree in the constitution of the tissues,"—which, we confess, is quite unintelligible to us. Again, the second sentence in paragraph 9, page 20, and the concluding sentence of page 24, awkwardly convey their meaning. These defects become even less numerous as we advance in the volume, and, if the book sells as it should, an opportunity will soon be presented of correcting them in a second edition. No physician or student should be without it.

Had not the translation of Rindfleisch been published, much that has been said of it might have been written of the Introduction to Pathology and Morbid Anatomy, by Green, of London, and reprinted by Henry C. Lea, of this city. We fear its use will be largely supplanted by the former volume, from which, indeed, many of its valuable stores in the shape of matter and illustrations are drawn. It is, however, an excellent work, and, being smaller and less expensive than that of Rindfleisch, recommends itself on these grounds.

THE PHYSICIAN'S ANNUAL FOR 1872: A COMPLETE CALENDAR FOR THE CITY AND COUNTRY PRACTITIONER: comprising a Monthly Calendar, Hospital Calendar of the Principal Cities of the United States, Chronological Record, List of Medical Colleges and Institutions, a Complete List of Medical Societies of the United States, with Form of Constitution for Medical Societies, Priced Catalogues of Medical Books, Surgical Instruments, etc.; besides much other Information of Interest and Importance to Physicians. Edited by S. W. BUTLER, M.D., and GEO. H. NAPHEYS, M.D. Pamphlet. Philadelphia, S. W. Butler, M.D., 1872.

The title-page of this little work indicates so fully the nature of its contents that it is not necessary that this notice should be a lengthy one. The aim of the editors has been to fill a void in the medical literature of this country, by presenting in a condensed form much useful information on a variety of subjects that can be had from no other source. This seems to have been successfully accomplished, and the book will, we think, be found useful to physicians.

BOOKS AND PAMPHLETS RECEIVED.

Transactions of the Medical Society of New Jersey, 1871. 8vo, pp. 33. Newark, N.J.

Transactions of the Second Annual Session of the Medical Society of Virginia, 1871. 8vo, pp. 116. Lynchburg, Va.

Announcement, Charter of Incorporation, and By-Laws of the Woman's Hospital of the State of Illinois. Pamphlet. Chicago, 1871.

A Clinical Manual of the Diseases of the Ear. By Laurence Turnbull, M.D., Physician to the Department of Diseases of the Eye and Ear of Howard Hospital of Philadelphia, etc. With a Colored Lithographic Plate and over one hundred Illustrations on Wood. 8vo, pp. 486. Philadelphia, J. B. Lippincott & Co., 1872.

First Annual Report of the Board of Health of the Health Department of the City of New York; April 11, 1870, to April 10, 1871. 8vo, pp. 628. New York, 1871.

Third Annual Report of the Children's Hospital. Boston, 1872.

Proceedings of the Second Annual Session of the State Medical Association of Arkansas, 1871.

Circular No. 6. Medical Supply Table of the U.S. Marine Hospitals, Washington, 1871.

GLEANINGS FROM OUR EXCHANGES.

THE SUBCUTANEOUS INJECTION OF MORPHIA IN TRAUMATIC ERYSIPELAS.—Professor Estlander, of Helsingfors (*Medical Times and Gazette*, December 9, 1871; from the *Deutsche Klinik*, No. 39), recommends the hypodermic use of morphia in the treatment of erysipelas. From the eighth to the fourth of a grain of the acetate or of the chlorate of morphia is to be injected in or near the affected part. The next day the inflammatory process, which during the preceding twenty-four hours may have made considerable progress, will be found in many cases to be at once arrested; but more frequently it will continue in a diminished degree, gradually yielding in the course of a few days to a continuation of the treatment. This plan of treatment admits of the simultaneous use of other remedies. As soon as, from shivering and the

appearance of the wound, erysipelas seems threatening, Prof. Estlander administers an emetic,—a measure which he thinks nowadays too much neglected, and one which he believes conducive to the moderation of the disease. The morphia is next injected, either as the sole means, or in conjunction with a daily painting with iodine, employing afterwards wadding, and compression by a roller where practicable.

CARDIAC COMPLICATIONS IN SMALLPOX, AND THEIR TREATMENT.—M. Desnos, Physician to the Lariboisière, is the author of a paper on this subject in the *Bulletin général de Thérapeutique* for November 15. All the forms of smallpox are not equally liable to be accompanied by cardiac complications. These are always absent in varioloid, are rare in the discrete form of variola, are more common in the form of variola in which the vesicles are collected in clusters, and are so frequent in confluent variola that their presence may be said to be the rule, their absence the exception. Myocarditis is more frequent than either endocarditis or pericarditis, in the confluent form; but all of them may exist in the same patient. In the other forms, inflammation of the endocardium and of the pericardium occur more frequently than that of the muscular substance of the heart. The post-mortem appearances of endocarditis and pericarditis do not differ from those presented by these diseases when occurring under other circumstances. They generally begin insidiously, causing but little increase of temperature, and scarcely any palpitation of the heart, or substernal pain. There are no peculiar physical signs.

In myocarditis the muscular fibre appears to the naked eye to be hyperæmic, bright red in color, but less consistent and more friable than normal; later it becomes pale red, and then grayish. Upon section, the tissue of the heart has a granular aspect, resembling that of the cortical substance of the kidney in Bright's disease. Later, its consistence gradually diminishes; its fibres become indistinct, and resemble dead leaves in color (*couleur feuille-morte*); the finger penetrates readily into the softened tissue; the papillary muscles are atrophied, and ruptured by the slightest pressure. This softening may be so marked that the heart will take the form and impression of anything with which it is brought in contact. When the heart is examined microscopically, there will be found granular degeneration of the muscular fibre, with an increased growth of the cellular tissue. Dr. Desnos looks upon this as the expression of an inflammatory process, and not as the result of decay. The symptoms of myocarditis are not characteristic in the beginning, and when the disease is advanced they do not differ from those usually presented by it, and depend in great part upon the paralysis of the muscular structure of the heart. In consequence of this paralysis, insufficiency of the mitral and tricuspid valves may occur, giving rise to a murmur which is soft, deep-seated, diffuse, transitory, and having a tendency to change the point where it is heard most distinctly. This is sometimes under the left nipple, and sometimes to the right of the sternum. The murmur becomes less distinct as the disease advances, and finally disappears. At the same time the pulsations of the heart grow feeble, until only a slight fremitus is felt.

The prognosis of the cardiac complication is always grave,—much more so in myocarditis than in endocarditis and pericarditis; in fact, myocarditis is one of the principal causes of sudden death in variola. It is, however, in many cases not beyond the reach of medicines. In the beginning, when there is reason to believe that inflammation still exists, local antiphlogistics, digitalis, and large blisters over the præcordial region may be of service. As soon, however, as the period of excitement has passed, caffeine, in doses of from two to ten grains, may be given, for its stimulant effect upon the muscular structure of the heart. Wine and quinia may also be prescribed, as tonics.

INTESTINAL OBSTRUCTION FROM ACCUMULATION OF FÆCES CURED BY THE INTERNAL AND EXTERNAL USE OF ICE.—M. Prunac reports (*L'Abeille Médicale*, December 25; from *Le Gazette des Hôpitaux*) a case in which urgent symptoms of intestinal obstruction, dependent upon this cause, yielded to the application of ice to the abdomen, and to injections of ice-water every quarter of an hour, after having resisted the more usual methods of treatment.

INJECTIONS INTO THE MEDULLARY TISSUE OF BONES.—M. Demarquay, in a communication made to the Académie de Médecine (*Gazette Hebdomadaire*, Oct. 27, 1871), gives the results of some experiments in which purulent and putrid liquids were injected into the medullary tissue of bones of rabbits. During the life of the animals it was observed that (1) their hair was altered, (2) they emaciated to a sensible extent, (3) the temperature of their bodies was raised from 38° Cent. to 39°, and in some cases even to 41° or 42°, to diminish again a moment before their death. After death the autopsies showed: 1. An inflammation, more or less marked, of the part operated upon. 2. Pulmonary congestion, inflammation of the lungs, and in one case gangrene of the lung. 3. Congestion and softening of the liver, spleen, and kidneys. 4. Metastatic abscesses of the liver in different degrees of development. These abscesses, although easily recognizable by the naked eye, have been carefully studied microscopically by M. Hénocque, who confirms the accuracy of M. Demarquay's observations. From the rapidity with which liquids holding solids in suspension are taken up by the circulation when thrown into the medullary tissue of bones, M. Demarquay concludes "that the veins of the bones open directly into the medullary cavity, or that they are only separated from it by a thin wall resembling the internal coat, which is able to withstand only a feeble pressure."

APPLICATION OF THE ATOMIC THEORY TO CHEMISTRY.—The following excellent remarks on this subject, by Professor Cannizzaro, are published in the *Journal of Applied Chemistry* for November, 1871, taken from a late number of *Nature*:

"A few are still dissatisfied with the arguments against the dualistic system, and continue to employ the atomic weight of Berzelius or the equivalents of Gmelin; and among those who have adopted the new system of atomic weights and formulæ there are many who have done so merely in a spirit of concession, and make a display of skepticism respecting its intrinsic value. Others, on the contrary, push their faith to the extent of fanaticism, and give equal value to the essential and accessory parts of the system, or even cling to the hypotheses which merely lean against it or have been discarded. They often speak on molecular subjects with as much dogmatic assurance as though they had actually realized the ingenious fiction of Laplace,—had constructed a microscope by which they could detect the molecules and observe the number, form, and arrangement of their constituent atoms, and even determine the direction and intensity of their mutual actions. These things, which have been offered as hypotheses more or less probable, and to be taken for what they are worth as simple artifices of the intellect, are valuable, and have done good service in collocating facts and inciting to further careful investigations, that one day or other may lead to a true chemical theory; but when perverted by being stated as actual truths they falsify the intellectual education of students of inductive science, and bring reproach upon the modern progress of chemical science."

DIAGNOSIS OF URETHRAL AND VESICAL DISEASES.—Sir Henry Thompson, in the course of a clinical lecture on this subject (*British Medical Journal*, December 9, 1871), says that he is in the habit of employing only four questions for urinary patients. The first question is, Is there any deviation in the frequency of passing urine? The second is, Is there any pain in the act? The third is, Is there any blood in the urine? And the fourth is, Are the characters of the urine altered? Almost any disease of the urinary organs will produce some deviation in the natural frequency of passing urine. As a rule, a man in health does not generally rise at night to pass urine, and he passes it during the day about five or six times. Cystitis will of course produce frequency of micturition, but stricture of the urethra may exist for some time before the patient is troubled in this way. If the frequency is greater during the day than at night, then the probability is in favor of his having a calculus in his bladder. If on the other hand the patient is most troubled at night, it is most probable that he is the subject of hypertrophied prostate. If the pain felt during the act of micturition be seated low down in the belly, there is almost certainly chronic cystitis. If the pain is in the penis or perineum, and is felt before micturition, it simply indicates that the mucous membrane is becoming

uneasy in consequence of distention. If the patient feels it after or during the passage of the urine, it indicates that he probably has stone; and this probability is increased if it be referred to the end of the penis, and if it be increased by exercise; but occasionally in chronic prostatitis the pain is also at the end of the penis. When blood is passed, it indicates either hypertrophy of the prostate or calculus: in the former case the blood is intimately mixed with the urine and is dark in color, while in the latter it is florid in tint, and is very apt to appear in the urine after a ride or drive, and to disappear when the patient is kept quiet. Much is to be learned also from an examination of the character of the urine. The first urine passed is not the best fitted for examination, as it will contain whatever happens to be lying in the urethra at the time. In cases of gleet or chronic prostatitis it is, therefore, not uncommon to find in the first few ounces pus and mucus and blood-corpuscles, while these may be entirely wanting in the rest of the urine.

ABDOMINAL PUNCTURE IN TYMPANITIS.—Mr. Wather's communication on this subject has called forth a reply from Mr. McBride in the *British Medical Journal* for November 4, in which the latter calls attention to the fact that the colon is not often punctured in the lower animals for the relief of tympanitis. The operation would not be without danger. The part of the intestine of the ox usually punctured is the first stomach (rumen), which is not liable to suffer from inflammation.

EFFECTS OF SWINGING IN DEPRESSING THE TEMPERATURE OF THE BODY.—Dr. Wjatschelaw Manassein (*The Academy*, November 1) gives the results in one of the last parts of *Pflüger's Archives* of a considerable number of experiments on rabbits, which he subjected to the action of swinging, the swing making from thirty to forty double vibrations in the minute. In all instances the temperature of the interior of the body fell, the maximum depression being $1^{\circ}.2$ C., the minimum $0^{\circ}.3$ C., and the average $0^{\circ}.66$ C. The effects were fully marked in about fifteen minutes, and lasted for about two hours. The tendency to sleep was always distinctly expressed. The depression in the temperature of the body was not occasioned by the mere renewal of the air in contact with the surface, as this was carefully guarded against by enveloping the animal in wool. The experiments have a practical side, as showing that swinging has the same effect in depressing the animal temperature in rabbits made ill by the injection of fetid pus into their vessels. Their temperature may in such cases even be lowered to the normal degree.

ANATOMY OF THE BRAIN.—A very elaborate account of the anatomy of the brain (*The Academy*, December 1) appears in the recently published part of Stricker's *Manual of Histology*, and a paper by the same author appears in the *Wien. Akad. Sitzungsberichte*, Band lx., Abtheilung 2, on the central projection of the special senses. The former is too difficult and complicated for any résumé to be given of it, but in the latter he points out: 1. That the central projection-area of the auditory labyrinth is represented by the walls of the Sylvian fissure, whither he has been able to trace a fasciculus from the nuclei of origin of the auditory nerve. 2. The central projection of the eye he considers to exist in the cortical substance of the occipital and of the temporal lobes, since he has been able to demonstrate the presence of connecting fibres passing to these regions from the nuclei of origin of the optic tract. 3. The central projection-area of the skin is effected by the parts of the cortex of the cerebrum investing the occipital and temporal lobes. It is noteworthy that both the sensory roots of the spinal cord and the tracts which represent the sensory nerves of the head possess a direct origin from the cortex of the cerebrum without intervention of the cerebral ganglia. 4. The central projection of the organ of smell, the medullary fibres of the olfactory lobe, is connected with the medulla of the anterior commissure, as Malacarne and others have shown, and this not only in mammals but in man. The anterior commissure conducts fibres connecting the two cerebral lobes, as well as the two olfactory lobes, and may, therefore, be regarded as an olfactory commissure; and the medullary fibres which this commissure sends to the cortex (namely, to the temporal and occipital lobes), as the central radiations of the vesical organs and skin.

CHRONIC CHLOROFORM NARCOTISM.—Dr. Anstie, in the course of an interesting article on this subject in the December number of *The Practitioner*, says that "one needs to be ever repeating, what is constantly forgotten, that alcohol and chloroform are strictly analogous with each other, though different in nearly all the phases of their action. Sulphuric ether is similarly analogous to both. They are all three pure stimulants (*i.e.* restorers of calm, natural functions) in small doses, inebritants when given in larger quantities, and anæsthetic narcotics in full doses." The great insolubility of chloroform in the serum of the blood causes it to escape entirely, or almost entirely, from the lungs within a very short time (one hour?) after its administration, and without undergoing decomposition in the body. This fact, which renders it so valuable an aid to the surgeon, becoming known to people generally, has led to its use by the sufferers themselves in various chronic painful affections. Apart from the danger of fatal chloroform narcosis being produced by this exceedingly rough and unskilful tampering with a potent narcotic, the practice of constant and protracted dosing with chloroform may cause chronic mischief, less in degree than, no doubt, but essentially similar in kind to, that which is produced by long-continued alcoholic excess. In this way maniacal excitement, resembling mania-a-potu, recurrent vomiting, insomnia, erotic excitement, especially in women at or near the menopause, and degenerative changes which accurately imitate the degradation of tissue produced by chronic drink, may be produced.

A SUPPURATING ECHINOCOCCUS UNDER THE SKIN OF THE NECK.—A girl aged 16 years (*Wiener Medizinische Presse*, November 19) was the subject of a swelling beneath the skin of the left side of the neck, which, upon being laid open, was found to be an echinococcus cyst in a suppurating condition. The neck is a rare situation for echinococci, according to Bergmann, who was able to collect only nine cases.

A RARE DEFORMITY OF THE THUMB.—A child aged 8 years, who was brought to Dommreicher's clinic (*Wien. Med. Presse*, November 19, 1871), presented the following deformities of the thumbs: The thumb of the right hand had three phalanges, and resembled in appearance the index-finger. On the left hand there were two thumbs, each having three phalanges.

COD-LIVER OIL DEPRIVED OF ITS DISAGREEABLE ODOR AND TASTE.—M. Carlo Pavesi writes to the *Journal de Pharmacie et de Chimie* (*Bulletin général de Thérapeutique*, November 15) that cod-liver oil may be rendered palatable and free from disagreeable odor in the following way: Take 400 grammes of cod-liver oil, 20 grammes of burnt coffee, ground, and 10 grammes of animal black; put them in a glass matrass, and heat in a warm bath to 50° or 60° C. during a quarter of an hour, the matrass being carefully corked. The mixture is to be allowed to stand for two or three days, being shaken from time to time, and is then to be passed through a filter. Cod-liver oil thus prepared is clear, and of an amber color. Its odor and taste are very like those of coffee, and do not resemble those of fish. Reagents prove that it contains all the principles of a pure oil.

HEBRA, the celebrated Professor of Dermatology at Vienna, recently made (*Gazette Médicale*, No. 45), in the course of his clinical lectures, the following curious statements:—1. About 96 per cent. of parents of children who have been affected with prurigo die of phthisis; 2. Women who have been for a long time sufferers from eczema of the scalp become in old age the subjects of cancer; 3. Variola and varicella are essentially the same disease. He has seen a severe epidemic of variola developed from a single case of varicella.

A QUESTION OF PRIORITY.—Dr. J. S. Lombard, late Assistant Professor of Physiology in Harvard University, writes to the *New York Medical Journal* (*Boston Medical and Surgical Journal* for November 9, 1871), desiring to call attention to an error in the last of Prof. Moritz Schiff's excellent articles entitled "Recherches sur l'Echauffement des Nerfs et des Centres nerveux à la Suite des Irritations sensorielles et sensitives," published in the *Archives de Physiologie normale et pathologique*, July and August, 1870. In speaking of Dr. Lombard's investigations on the relation between various mental conditions and the temperature of the head, Prof. Schiff claims priority in the discovery of the facts announced by Dr. Lombard. He says he has not seen the original paper,

but knows Dr. Lombard's experiments only by the analysis of them which appeared in the *Archives de Physiologie* of September, 1868. He then states that as early as the winter of 1867 and 1868 he communicated his principal results and his method to the Museum of Natural History of Florence, and that the Italian journals published short extracts from them in April and May. Dr. Lombard says that Prof. Schiff evidently supposed that his (Dr. L.'s) original paper had appeared but a short time before the analysis in the *Archives*, but that, "on the contrary, my researches had all been published in the *New York Medical Journal* of January, 1867, and had, therefore, appeared more than a year before the analysis." Dr. Lombard's date of publication is, consequently, six months prior to the earliest date claimed by Prof. Schiff. Not only this, but most of Dr. Lombard's results had been communicated to the "Boston Society of Medical Observation" prior to June, 1867, and, in fact, many of the experiments had been completed in the autumn of 1866.

PARALYSIS OF THE BLADDER TREATED BY THE CONSTANT CURRENT.—Dr. Althaus, in the *British Medical Journal* for November 18, calls attention to some experiments of Professor Budge, of Greifswald, who faradized various parts of the brain so as to determine the source of the nervous supply of the bladder. It was observed that by faradizing the cerebral hemispheres, the corpora striata, and thalami optici, no effect was produced, nor did any action become perceptible when the cerebellum was faradized. As soon, however, as the pedunculus cerebri and the testiform bodies were touched by the electrodes, the viscus was seen to contract, and urine was voided. The pneumogastric and sympathetic may be divided without altering the phenomena previously observed; but, after section of the cord, faradization of the parts just mentioned proved ineffectual. Besides the one just mentioned, there is another nervous centre for the bladder, in the lower portion of the lumbar cord, faradization of which causes well-marked movements of the viscus, and the excitability of which after death persists longer than that of any other portion of the cord in relation to the bladder.

Another important result of Budge's researches has been that the muscle hitherto described by anatomists as sphincter of the bladder is really no sphincter at all, physiologically speaking, and that the longitudinal as well as the circular unstriated muscular fibres of the bladder—that is, the muscles known as detrusor urinæ and sphincter vesicæ—serve exclusively for expelling the urine, without having the least effect in closing up the orifice of the viscus. Faradization of these muscles did not prevent the flow of urine, which was immediately checked when the electrodes were directed to the membranous portion of the urethra, acting upon the constrictor urethræ and bulbo-cavernosus muscle.

EXCISION OF THE HEAD AND SHAFT OF THE FEMUR.—Dr. Kearns reports in *The Clinic* for December 30 a case in which he performed the above operation for coxalgia. He says, "I made an incision over the trochanter and down the shaft; exposed the head without difficulty, the amount of supuration having separated the bone from the tissues to a great extent,—the head, separated from the neck, remaining attached to the acetabulum. The neck and trochanter being diseased, I exposed five or six inches, seeking for healthy bone, before excising. At this point the bone was removed, but found still to be diseased. Twice afterwards a section an inch and a half each was removed, bringing me to the expansion above the condyles. The adherent head was removed from the acetabulum, the cavity carefully cleaned out, and the wound closed by sutures and adhesive strips and placed in any position the little patient afterwards thought most comfortable. Any manner of extension was considered impracticable, from the extent of the wound, and extreme debility of the patient. . . . The wound healed kindly, the discharge continuing longest at the point opposite the acetabulum. In six weeks' time the boy was upon his crutches, and walked around in the hospital and grounds adjacent, the weight of his foot continuing the extension, and in fact being the only extension the limb ever had. At the expiration of three months he left the hospital, and I have seen him only once since December 1, when, upon careful examination of the limb, I found, where the femur was, a hard substance larger than the

natural bone, which I am inclined to think is ossific matter. The limb is not atrophied, or very little, and shortened five and a half inches; the motion of hip and knee being good, with power to flex and extend, to rotate, adduct, and abduct, and with power sufficient in the leg to support for a short time the weight of the body. The boy's health seems perfectly restored."

SNAKE-BITES TREATED WITH AMMONIA.—The *Indian Medical Gazette* says (*Nature*, November 30) that a report, furnished by the Inspector of Police to the Bengal Government, shows that, of 939 cases of snake-bites in which ammonia was administered by the police, 702 are reported to have recovered, and the average length of time between the bite and the application of the ammonia is said to have been, in fatal cases, four hours, twelve minutes, and thirteen seconds, and, in cases of recovery, three hours, twenty-eight minutes, and fourteen seconds.

MISCELLANY.

THE EXHIBITION DURING THE SESSION OF THE ASSOCIATION.—In accordance with the determination to have an exhibition on the 7th, 8th, 9th, and 10th of May, 1872, during the next Session of the Association, the Committee of Arrangements have issued a Circular (dated January 20, 1872) in which they "respectfully and earnestly appeal for contributions of objects to be exhibited—and for other available co-operation—to members of the medical profession, pharmacists and manufacturers of chemicals, to opticians, instrument makers, publishers and booksellers, and to all others who are concerned in manufacturing or dealing in anything related to the study and practice of medicine and surgery and the associate sciences."

"They will gratefully receive choice specimens and examples (likely to prove interesting through novelty, rarity, importance, or superior character) of drugs, medicines, and other remedial appliances—including special chemicals and pharmaceutical compounds and materials—as well as the apparatus employed in pharmaceutical and chemical processes; also of optical and other instruments of observation and precision; of surgical instruments and implements; of preparations and objects in natural history, including human and comparative anatomy, morbid or healthy; of models, drawings, paintings, prints, and of printed works—of recent date or standard character—on medicine, surgery, and the associate sciences."

The committee trust, moreover, that their avowed "hesitation to undertake a very general exhibition will be attributed rather to a natural doubt of their power to accomplish the work with the means at their disposal, than to any disinclination or indifference as to the result." The present call has been issued "at the earliest practicable moment, in the hope of securing a sufficiently prompt attention, from all parties, to enable them to do justice to the distant contributors, whom they are still apprehensive of being unable to reach in proper time."

They notify exhibitors that "the general plan of arrangement, and amount of space to be allotted to the several departments and collections, will have to be decided by the end of March; and all the objects to be exhibited must be within reach of the committee by the second or third week of April next."

"In order, therefore, to prevent confusion and disappointment, lists of objects offered for exhibition, and estimates of the amount of space desired for the purpose, will be required as soon as practicable after the publication of this circular."

"Communications addressed to Wm. Pepper, M.D., 1215

Walnut Street, and F. F. Maury, M.D., 1218 Walnut Street, the Sub-Committee on the Exhibition, will receive immediate attention."

Signed by

EDWARD HARTSHORNE, M.D.,
Chairman of the Committee of Arrangements,
1439 Walnut St., Philadelphia,

and

D. MURRAY CHESTON, M.D., Secretary,
25 S. 16th St., Philadelphia.

A FEMALE BONE-SETTER.—The *British Medical Journal* for November 25 contains an account of a female bone-setter, named Regina Dal Cin, who has obtained a wide-spread reputation, and has visited, among other places, Venice, Trieste, Pesth, and Vienna. In each place crowds of patients, both belonging to the locality and coming from a distance, have flocked to her. Professional opinion is divided as to her merits. Recently, in Vienna, where her proceedings have attracted a good deal of attention and have given rise to some degree of controversy in medical circles, an officially appointed committee, consisting of Drs. Weinlechner, Lorinser, and Mosetig, accompanied her in her visits to four patients. Their report was very unfavorable to her pretension. The substance of it was to the effect that she has only the most superficial idea of the nature of a dislocation, or of the means of reducing it; that in one case she mistook the great trochanter for the head of the femur; that her operative proceedings consist in the performance of purposeless and hasty movements, which can neither reduce a dislocation nor remove a contraction; and that her statements as to the comparative length of the limbs are deceptive. In consequence of the unfavorable nature of this report, the permission to practise in Vienna which had been granted to her has been withdrawn.

THE PRINCE OF WALES' ILLNESS.—A report in the *British Medical Journal* for December 9 shows that there is abundant reason for believing that the Prince of Wales contracted the fever from which he is now convalescing while the guest of Lord Londesborough, at Scarborough. The lodge, the writer says, affords in perfection all the conditions fitted to favor the introduction and propagation of enteric poison. The house is ill built and difficult to ventilate, with thirteen communications with two cesspools, which are in the basement and inside the house. These cesspools empty into sewers which run by a common outlet downwards towards the sea and join the system of common sewers of the south district of Scarborough. This sewer-system is subject to great backward pressure from the influence of the tides, which produces so great a pressure of sewage gas upon the traps, in the absence of ventilation of the sewers, that the most efficient and complete traps cannot resist it: consequently, during the reflux of the tide, the lodge, with its thirteen sewer-openings, and its cesspools beneath, was subject to inundations of the sewer gas. It is also shown that typhoid fever existed in at least one district the sewers of which fall into a common outlet with those of Londesborough Lodge; so that the back-draught might have carried back to the lodge any poisonous emanations with which the common sewer was charged. A large proportion of the party assembled to meet the prince became affected with diarrhoea, and, in addition to Lord Chesterfield, who occupied the prince's room after his departure, two servants employed in the house at the time were attacked by typhoid fever. Moreover, the visitor who occupied the room

just before the prince was affected with diarrhoea. Adjoining this room was a cabinet containing a water-closet, which was connected with a cesspool beneath.

IODIDE OF POTASSIUM.—The price of this medicine has undergone, according to the London *Lancet*, a very significant increase during the last few months. In June it was 16s. 6d. per lb.; in July, 20s.; in August, 24s. 6d.; in September, 28s.; in October, 30s.; in November, 36s. or 38s. This increase in price is probably due partly to an increased consumption of the drug in medicine since it has been discovered not only that the human system bears much larger doses of it than was supposed, but that many inveterate forms of syphilitic disease yield to large doses after having resisted smaller ones, and partly to the extensive use which is now made of it in photographic processes.

SCANDINAVIAN PHARMACY.—In Sweden, Norway, and Denmark the number of apothecaries is limited by law, there being only about four hundred in the three kingdoms, about one-third of the number in the city of London alone. In the town of Christiania, with a population of 60,000, there are but seven; in Bergen, which has 30,000 inhabitants, there are three; and in Copenhagen, with 175,000 inhabitants, there are thirteen. The names of the proprietors are never attached to the shops, but these are distinguished by figures, those of the lion, swan, and elephant being the favorites. The windows contain nothing but scientific apparatus, and within the shops nothing is sold but medicines, not even perfumery or secret remedies.

EFFECT OF WEARING HIGH-HEELED BOOTS.—Prescott Hewett, Esq., F.R.S., Surgeon to St. George's Hospital, London, thus discoursed, in a clinical lecture on a case of severe injury to the lower end of the femur (*Medical News and Library*, December, 1871), concerning high-heeled boots. In describing the cause of the injury sustained by the patient, he stated that "she wore high-heeled boots. I do not know how it has happened, but there have been a great many accidents in the International Exhibition. I suppose they must have arisen partly from the height of the stairs, and partly from the height of the ladies' heels. Ladies are anxious to look tall, thinking that their appearance is improved, and therefore they wear high-heeled boots. The first thing to which I would call your attention in this case is the high heels of the boots. Ladies will for the most part wear them; but they could not do a worse thing, for their feet are placed in a difficult and most unnatural position. They are very tenacious about this fashion, but you must be as tenacious against it; the number of accidents in consequence is very great. To show you how very tenacious ladies are on this point, last year I was sent for to see a young lady in one of our London hotels. She wished to consult me about her foot. On seeing it, I thought its state depended on her boots, and I asked to see them. The boots were brought in by the lady's maid, but the only thing I could observe about them was an immensely high heel. I said, 'It is the high heel of your boots that causes the mischief, and unless you diminish this I can do nothing for you.' She became quite angry, and said she could not alter them: 'I cannot do it, and I will not.' Suddenly she toned down, and said, 'Pray, sir, what would people say if they saw me walking about the Park without high heels?' I said, 'It is simply heels *versus* brains. If you have brains, you will cut off the heels; if you have no brains, you will continue to wear them.' She fortunately had brains, cut off the heels, and her foot got quite well."

THE INJURIOUS INFLUENCES OF SCHOOLS.—Dr. Rudolf Virchow has lately published an essay which has been translated into English, and in which he has brought together many valuable suggestions with regard to the hygienic influences of the public schools of Prussia. We have not seen the book, but the conclusions of the author are said, by the New York *Tribune*, to be succinctly stated, to be as applicable to this country as to Prussia, and to afford fruitful materials for reflection to all who have at heart the progress of education. Among the injurious influences of the prevailing school-system which Professor Virchow enumerates is the tendency to produce congestion of blood in the head. In the bending of the neck, the blood-vessels which should bring back the blood from the head to the breast are compressed. The pressure is increased by tight clothing, and other circumstances have a similar effect. The result is a pressure on the stomach, hindering the activity of the diaphragm, the most powerful of the muscles of inspiration. The reflux of the blood from the veins of the neck to the breast is thus impeded. The strained activity of the brain, causing an increased flow of blood through the arteries, also contributes to the production of the evil. Headache, bleeding of the nose, goitre, curvature of the spine, and diseases of the chest, are among the troubles that may be traced to this cause. Other evils are pointed out by Professor Virchow, which may suffice to arouse public attention to the subject, although at present, he admits, there is such a want of exact information that it is difficult to propose an adequate remedy.

THE death of Johann Florian Heller, Professor of Pathological Chemistry in Vienna, occurred on the 25th of November, of disease of the heart.

THE results of experiments made at Vienna with condurango, a quantity of which the Austrian government purchased at a high price, have shown it to be quite worthless.

OFFICERS OF THE MEDICAL SOCIETIES IN PHILADELPHIA.—The principal officers of five of the medical societies in this city are as follows:

College of Physicians of Philadelphia.—President, George B. Wood, M.D.; Vice-President, George W. Norris, M.D.; Secretary, John H. Packard, M.D.; Treasurer, J. Rodman Paul, M.D.; Librarian, Robert Bridges, M.D.; Curator, Thomas Hewson Bache, M.D.; Recorder, J. Ewing Mears, M.D.

County Medical Society.—President, D. Hayes Agnew, M.D.; Vice-Presidents, Drs. J. G. Stetler and Wm. Goodell; Recording Secretary, Dr. Lucius S. Bolles; Assistant Recording Secretary, Dr. Nathan Hatfield; Corresponding Secretary, Dr. Henry Leaman; Treasurer, Dr. Wm. M. Welch.

Pathological Society.—President, James H. Hutchinson, M.D.; Vice-Presidents, William Pepper, M.D., and John H. Brinton, M.D.; Secretaries, W. W. Keen, M.D., and J. Ewing Mears, M.D.; Treasurer, Wharton Sinkler, M.D.; Recorder, James Tyson, M.D.; Curator, De F. Willard, M.D.

Obstetrical Society.—President, Wm. Goodell, M.D.; Vice-Presidents, John L. Ludlow, M.D., John S. Parry, M.D.; Secretary, James V. Ingham, M.D.; Curator, Horace Williams, M.D.

Northern Medical Association of Philadelphia.—President, Dr. Lemuel J. Deal; Vice-President, Dr. N. Hatfield; Treasurer, Dr. A. M. Slocum; Recording Secretary, Dr. Charles Carter; Corresponding Secretary, Dr. Joseph R. Bryan; Reporting Secretaries, Drs. F. W. Lewis and Chas. K. Mills.

EPIDEMIC DISEASES appear to be very prevalent at the present time in Vienna, the number of cases of measles, small-pox, scarlet fever, and diphtheria having recently undergone a marked increase.

Cholera has broken out at Medina, and between September 21 and October 4, 773 deaths took place. It is also present in Mecca. Cases have occurred at St. Jean d'Acre, Samsoon, Galatz, Amol, and Astrachan.

OPPOLZER'S SUCCESSOR.—It is said that Professor Bamberger, of Würzburg, has at length been appointed Professor of Medicine in the University of Vienna.

MORTALITY FROM SMALLPOX.—The number of deaths from smallpox in Philadelphia during the weeks ending January 13 and 20 were 425, of which 242 were of minors.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending	
	Jan. 13.	Jan. 20.
Consumption	49	54
Other Diseases of Respiratory Organs	56	52
Diseases of Organs of Circulation	12	13
Diseases of Brain and Nervous System	47	46
Diseases of the Digestive Organs	14	14
Diseases of the Genito-Urinary Organs	11	8
Zymotic Diseases	241	229
Cancer	9	6
Casualties	4	6
Debility	21	27
Intemperance	0	1
Malformation	0	1
Murder	1	0
Old Age	14	17
Scrofula	1	2
Stillborn	22	15
Suicide	2	0
Tetanus	0	2
Tumors	0	2
Unclassifiable	14	12
Unknown	0	1
Totals	518	508
Adults	262	244
Minors	249	264

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JANUARY 5, 1872, TO JANUARY 18, 1872, INCLUSIVE.

PETERS, DE WITT C., SURGEON.—By S. O. 13, War Department, A. G. O., January 16, 1872, to report in person to the Commanding General, Department of the South, for assignment to duty.

HOFF, A. H., ASSISTANT-SURGEON.—By S. O. 213, Department of California, December 11, 1871, on being relieved, to comply with S. O. 431, c. s. from A. G. O.

AZPELL, T. F., ASSISTANT-SURGEON.—By S. O. 221, Department of California, December 22, 1871, assigned to duty at Alcatraz Island, California.

HEIZMANN, CHARLES L., ASSISTANT-SURGEON.—By S. O. 3, Military Division of the Missouri, January 4, 1872, leave of absence extended thirty days.

YEOMANS, A. A., ASSISTANT-SURGEON.—By S. O. 9, War Department, A. G. O., January 11, 1872, granted leave of absence for six months, on Surgeon's certificate of disability.

WILSON, WILLIAM J., ASSISTANT-SURGEON.—By S. O. 4, District of New Mexico, January 8, 1872, to accompany Troop H, Eighth Cavalry, from Fort Union to Fort Craig, N.M., and await at the latter post further orders.

FITZGERALD, J. A., ASSISTANT-SURGEON.—By S. O. 5, Department of the Missouri, January 6, 1872, when relieved at Fort Harker, Ks., by Surg. B. E. Fryer, U.S.A., to proceed to Fort Leavenworth, Ks., and report to the commanding officer for assignment to duty.

THURSDAY, FEBRUARY 15, 1872.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE INFLAMMATORY ORIGIN OF PHTHISIS.

BY JAMES H. HUTCHINSON, M.D.,

President of the Pathological Society of Philadelphia; one of the Attending Physicians to the Pennsylvania Hospital.

I HAVE at present under my care in the women's medical ward of this hospital several cases of phthisis in different stages, and I intend to occupy your time during the coming hour with the consideration of some of the forms of disease comprehended by the term. Most if not all of the cases have originated in previous inflammation of the lung; and the part played by this important process in the production of phthisis will occupy our attention particularly to-day.

Nearly thirty years ago Dr. Thomas Addison wrote that *inflammation constitutes the great instrument of destruction in every form of phthisis*, and a very similar opinion appears to have been entertained by Dr. C. J. B. Williams; but so remarkable was the influence exerted by the great Laennec upon the medical mind that his dogma that the peculiar lesion of phthisis consists of the deposition of tubercle, or, in other words, of an adventitious product in the lungs, has been very generally accepted until quite a recent period, when attention was again called to the inflammatory origin of many cases of phthisis by Niemeyer and other German pathologists, whose writings would have undoubtedly attracted less attention had those of Dr. Addison been better known. The case which I have brought into the amphitheatre to-day is, I think, an interesting one, because up to the time the hemorrhage occurred the patient believed herself, and was thought by her friends to be, in perfect health; and we have therefore before us one of those rare cases in which hemorrhage is the first symptom, if not, as I am disposed to think, the exciting cause, of the disease from which she is now suffering.

Without further prelude, I will read the notes of the case, which have been very carefully drawn up by the resident physician, Dr. George S. Gerhard:

Margaret K., aged 27, an Irish domestic, and free from any known hereditary taint, was admitted November 18, 1871. She has been the mother of two children, one of whom is now living; the other died in infancy. Her husband died four years ago, of phthisis.

She states that she enjoyed good health until nine months before her admission to the hospital, when she suddenly and without any premonition whatsoever, while riding in a street-car, coughed up a large amount of frothy red blood. Two days afterwards a second hemorrhage occurred, and two weeks after this again there occurred a third. The blood on these two latter occasions was dark and partially coagulated, and the quantity as compared with that of the first hemorrhage was small. At the time of the occurrence of the first hemorrhage she was suffering from amenorrhœa, and since then the menses have been scanty and irregular in their recurrence.

These hemorrhages were not followed immediately by any marked symptoms. After the lapse of several weeks, however, the patient began to suffer from pulmonary and digestive symptoms. The pulmonary symptoms were a dry cough and a certain amount of dyspnœa on exertion; the digestive symptoms were those of ordinary dyspepsia, accompanied by frequent paroxysmal attacks of sharp lancinating pain, referred to the region of the stomach. The pain was invariably relieved by pressure and hot drinks.

On admission, the patient is anæmic, but in tolerably good

flesh. Her tongue is furred, her appetite is poor, and her bowels are rather obstinately constipated. Her cough, which except at night is not very troublesome, is attended by a rather scanty and somewhat viscid expectoration. She does not sweat at night.

Physical examination of the chest reveals an absence of depression of the supra- and infra-clavicular spaces upon either side; there is slight dulness on percussion over and below both clavicles as far as the second rib; there is also slight dulness in the superior scapular region of the left side; the vocal fremitus is more marked below the right than below the left clavicle. Posteriorly there can be detected no difference in the vocal fremitus upon either side.

Fine moist crackling sounds are heard below the left clavicle on deep inspiration; the same sounds, though fewer in number, are heard below the right clavicle when the patient is made to cough, but not on ordinary deep inspiration. The respiration below the left clavicle is broncho-vesicular. Posteriorly in the superior scapular region of the left side coarser crackling sounds are heard.

Cod-liver oil, $\text{f}\frac{3}{ss}$ three times daily, and a cough-mixture, were prescribed for the patient.

On the 23d, A.M., temp., $98\frac{1}{2}^{\circ}$; pulse, 80; resp., 24; P.M., temp., $99\frac{1}{2}^{\circ}$; pulse, 100; resp., 28.

24th.—A.M., temp., 98° ; pulse, 100; resp., 24. P.M., temp., 99° ; pulse, 84; resp., 32.

25th.—A.M., temp., $98\frac{1}{2}^{\circ}$; pulse, 80; resp., 32. P.M., temp., 100° ; pulse, 88; resp., 32.

26th.—A.M., temp., $99\frac{1}{2}^{\circ}$; pulse, 76; resp., 28. P.M., temp., $99\frac{1}{2}^{\circ}$; pulse, 92; resp., 24.

27th.—A.M., temp., 99° ; pulse, 84; resp., 32. P.M., temp., 99° ; pulse, 92; resp., 32.

28th.—A.M., temp., 98° ; pulse, 84; resp., 24. P.M., temp., $98\frac{1}{2}^{\circ}$; pulse, 92; resp., 28.

29th.—A.M., temp., 100° . P.M., temp., 99° .

30th.—A.M., temp., 98° . P.M., temp., 98° .

Our patient is free from any hereditary predisposition to phthisis, and I can find in her history no other exciting cause of the disease than the first hemorrhage, which took place about nine months before her admission into my wards, and which was probably vicarious, since she was suffering from amenorrhœa at the time. The blood which was expectorated on the two subsequent occasions was dark and partially coagulated, and it is possible that it had been left by the first hemorrhage in the bronchial tubes and air-cells. There can be no doubt that this blood acted as an irritant to the pulmonary tissue, and that the symptoms which were soon afterwards complained of were due to a pneumonia. Against the view that blood is capable of causing inflammation it might be objected, as Dr. Williams has recently done, that blood may be effused into the peritoneal cavity without giving rise to peritonitis; but, independently of the fact that I have often noticed an exacerbation of temperature immediately after a hemorrhage, I do not think there is any analogy between a closed sac and the bronchial tubes and air-cells. In the former the blood is protected from the influence of the air; in the latter, decomposition must inevitably take place.

I do not, of course, think that this patient has had an attack of what is ordinarily termed pneumonia, in which there is an exudation into the air-cells of a fibrinous and highly-coagulable material, and which to distinguish it from other forms is called pneumonia crouposa. It is more probable that the inflammation has been of the variety known as pneumonia catarrhalis, in which there is a rapid production of cells and little or no exudation of fibrin, and which has a tendency to affect isolated lobules in the upper lobes of the lungs, and to occur in persons of little vital resistance. These two forms of pneumonia do not differ from each other quite so much as might at the first appear, the difference consisting rather in the constitution of the patients in whom it occurs than in the morbid process itself. The exudation

of fibrin in the sthenic form probably depends upon the vitality of the white corpuscles, since recent researches tend to show that fibrin is formed either directly from the white corpuscles or from a substance derived from them. The absence of fibrin from an exudation containing a large number of leucocytes is proof, therefore, that the latter were incapable of elaborating it. An inflammatory exudation occurring in a healthy person will generally be followed by suppuration whenever from the violence of the inflammation, or from any other cause, fibrin is not formed in large amount from the corpuscles; but the same causes will in a weakly patient, directly or indirectly, cause its caseous degeneration, for there is little question that when leucocytes are retained within the body, as is the case in catarrhal pneumonia, the amœboid movements within them are arrested, and their death speedily follows.

It is the catarrhal form of pneumonia which is most frequently followed by phthisis; but this may in some instances be the termination of the more sthenic variety. When resolution does not occur, the products of the inflammation may undergo what is known as the caseous degeneration, in which the cells and their nuclei will be found under the microscope to have become contracted, and the cells to have a tendency to arrange themselves in masses,—effects, probably, of the withdrawal of water, and of the interference with nutrition which the presence of so large a number of cells must occasion. The macroscopic appearances are so well known that it is unnecessary to describe them. The disease may be arrested at this point, and the caseous masses may remain unaltered in the lungs for years, or it is even possible that they may undergo fatty change and so be absorbed. Much more frequently, however, the tendency is to further change, and they give rise by pressure to the death of the tissue which immediately surrounds them. Hence we have softening of the exudation and its elimination, during which processes cavities in the lungs are formed. Their presence also excites an increased growth of connective tissue, to which many of the physical signs relied upon in the diagnosis of phthisis are directly owing.

The catarrhal form of pneumonia is not admitted by all authors, but there can be no doubt that it really exists; and we have in the inflammation of some of the other tissues a very analogous process. For instance, in pleurisy we may have a highly fibrinous exudation, accompanied by little or no apparent cell-growth and by very little serous effusion, or on the other hand the exudation may contain a very large number of corpuscles and scarcely any fibrin. The latter is more apt to occur in persons of a weakly habit, or in those who have been debilitated by previous sickness. In adenitis, also, there may be great swelling, redness, and pain, and then a rapid breaking down of the inflammatory products into pus; or we may have a slower process, in which there is increased production of cells, a hyperplasia of the gland, and then instead of suppuration we may have caseous degeneration taking place. All of you have seen patients with enlarged glands in the neck which have undergone this alteration, and which occasion no irritation, and have been tolerated for years. At last inflammation may be set up in the tissue surrounding the gland, by which it is softened and eliminated. I believe we will find the latter illustration of use to us in the study of the pathology of phthisis. It not uncommonly happens that a patient who has had catarrhal pneumonia preserves, as a result of that process, a certain amount of dulness under one or both clavicles, together with some harshness and elevation of pitch of the respiratory sounds. In such a patient we may be almost certain that there are caseous masses in the upper part of one or both lungs, and that these are occasioning no irritation. If, however, we have in ad-

dition to the above signs moist crackling, we may diagnose the occurrence of softening and elimination of this foreign matter. To this softening and elimination is in many cases to be traced the further extension of the disease, as they can scarcely take place without exciting a certain amount of inflammation in the adjacent lobules of the lungs.

The patient before you, if we may accept the history she gives us and the deductions I have drawn from it as correct, is now affected with phthisis, and, if I interpret the physical signs properly, the stage of softening has been reached. This is shown by the moist crackling sounds which are heard when a full inspiration is taken or after coughing; but these sounds are heard only under these circumstances, and this proves to me that the softening has not yet advanced to any great degree and affords me some ground for a favorable prognosis in this case. I regard also as favorable the low temperature which has been almost constantly observed and the absence of colliquative sweats, of the characteristic sputa, and of any very great degree of emaciation.

A knowledge of the true pathology of a disease is necessary to a physician, to enable him not only to treat it intelligently, but to take such precautionary measures as will prevent its occurrence in persons predisposed to it. I have attempted to show that phthisis is frequently the consequence of a previous inflammation. This, it should be remembered, may sometimes commence as a moderate bronchitis, which by extension may subsequently involve the alveoli and become a catarrhal pneumonia. The popular idea on this point, as Niemeyer has pointed out, is more correct than that held by most physicians. The books tell us that phthisis commences with a dry hacking cough; our patients, that their consumption has arisen from a neglected cold or catarrh. Knowing this fact, we look upon catarrh in a patient predisposed to phthisis as a disease requiring care and attention, and if the patient receive these, the disastrous consequences which might otherwise occur are avoided. There is therefore a stage previous to that known as the stage of deposition,—a stage which it is important to recognize, in order that the proper treatment may be adopted at a time when there is most reason to believe that it will arrest the morbid process, and which physicians have overlooked simply because they believe that indurations of the lungs which cannot be traced to sthenic pneumonia must of necessity be due to deposition of tubercle.

The objection that the adoption of the theory of the inflammatory origin of phthisis might lead to errors of practice, by the substitution of an antiphlogistic treatment for that now generally in use, seems to me scarcely worthy of serious consideration. It is not the fashion at the present day to treat any form of inflammation by the abstraction of large quantities of blood or by any depressing remedies; and no one who bears in mind the typhoid tendencies of catarrhal pneumonia is likely to have recourse to any plan of treatment which is apt still further to debilitate the patient. Besides which phthisis is not an inflammation, but the consequence or sequel of an inflammation, calling most unmistakably for the employment of tonics, stimulants, and nutrients. These are the remedies I have prescribed in this case and under their use some improvement in the general symptoms and physical signs has already been noted.

M. MICHAELIS (*Annales de Dermatologie et de Syphiligraphie*, 3^{me} année, No. 1; from *Giornale italiano della Malattie venere*, etc.) calls attention to the fact that the lesion produced by syphilis in old people may sometimes simulate cancer.

ORIGINAL COMMUNICATIONS.

ON CERTAIN HUMAN PARASITIC FUNGI,
AND THEIR RELATION TO DISEASE.

BY JOSEPH G. RICHARDSON, M.D.,

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Natural Sciences, and ordered to be published. (See p. 193.)

A KNOWLEDGE that there do actually exist such unquestionable parasitic diseases as the potato-rot in the Vegetable kingdom, and the muscardine of silkworms in the Animal, has for many years led reflecting minds in the medical profession to reinvestigate, from time to time, ancient stocks of information, and to search after new facts in the relation of the lower to the higher organisms, of which we ourselves form so important an integral part, in order to discover whether analogues of the disorders named above are also to be found among the maladies to which humanity is subject.

Nor have these researches been by any means unfruitful; for although the observations of Hallier on cholera and typhoid fever, Salisbury on ague and small-pox, etc., are doubted or even ridiculed by a majority of the pathologists and microscopists in this country and Europe, on the other hand the experiments and deductions of Schoenlein, Gruby, Bennett, and Tilbury Fox, in regard to Favus and the whole group of parasitic cutaneous affections, are now fully accepted by most scientific physicians, and are contested by so small a number of medical men that, although this scanty minority is headed by the famous authority in dermatology, Erasmus Wilson, our doctrine of the existence of dermatophytic disorders in the human race may be considered to-day fairly established.

As I have elsewhere remarked, however, we see, at present, in regard to Favus and its congeners, the same old battle fought which fifty years ago was so strenuously contested by Biett and Morgagni on the one hand, and the microscopists on the other, in relation to Scabies, now universally admitted to be due to a minute insect, the *Acarus scabiei*; and for the student of human nature it is a most interesting confirmation of the wise king's dictum, "There is no new thing under the sun," to observe how the same doubts, followed by the same objections, were urged against the parasitic character of the itch, that are now put forward in opposition to the vegetable nature of Ringworm or Favus. Thus, Biett, Cazenave, Lugol, and others denied that even with the aid of microscopes of high power any insect whatever could be discovered. When by a succession of lucky accidents so many observers blundered into seeing the *Acarus* that this position was no longer tenable, opponents of the parasitic theory changed their base of operations, and, admitting the occasional existence of the insect, stoutly maintained that instead of being the *cause* of Scabies it was a secretory product of that affection, and by no means a constant one. Finally, when the *proof* became incontestable that the whole disease could arise from the deposit of a single itch-insect upon the skin of a previously healthy person, the anti-microscopists took refuge for years in the assertion that in such cases "the insect taken from the scabious vesicle, *being charged with the virus,—the fluid of the vesicle,—*by penetration of the orifice inserted this virus, and produced the disease, like the inoculation of cowpox:" certainly a most plausible and ingenious invention, and one which, however improbable observed facts might render it, was nevertheless from the nature of things extremely difficult to improve absolutely.

As an admirable example of the vegetable human parasites, I have the good fortune of being able to pre-

sent for your inspection this evening a beautiful specimen of the *Microsporon furfur*, the fungus of the cutaneous disease known as Tinea versicolor, or Chloasma. It shows in a very distinct manner the groups of spores clustered together like bunches of grapes, and also the mycelial threads of the growth, which ramify among the epithelial scales of the skin where they flourished.

The case from which this was derived was that of a Belgian named August K—, about forty years old, who was admitted into the Pennsylvania Hospital on the 29th day of June, 1871. He had been for some time a sufferer from syphilis, and at the date of entrance into the hospital exhibited deep cicatrices of rupia upon his legs. The eruption of Tinea occupied almost the whole anterior surface of the chest and upper part of the abdomen, but yielded readily to the application of an alkaline wash after its true nature was discovered. In this instance the complaint assumed, in its macroscopic as well as its microscopic characters, almost a typical form, since Dr. McCall Anderson, one of the most recent English authorities upon the subject, in his excellent manual of skin diseases observes that Tinea versicolor generally makes its appearance in little spots about the size of a pin's head, which gradually increase in size, retaining their circular form, but not healing in the centre, as is the case with ringworm. Gradually these spots unite, forming upon the trunk large irregular patches, near the edges of which we may usually detect small spots of eruption, which are very characteristic. The skin of the affected surface is scarcely if at all elevated above the surrounding parts, but is less smooth than in health, and is frequently the seat of a very fine desquamation, so fine as to resemble dust, and having a slight yellowish tint. The itching is generally moderate, sometimes almost absent, and occasionally very severe, although not specially aggravated at night.

The method of demonstrating the parasitic growth in this instance, when it was first detected by Dr. G. S. Gerhard, Resident Physician to the Pennsylvania Hospital, is quite simple,—a few fragments of the light-yellowish scales being merely scraped off the anterior surface of the man's thorax with a sharp scalpel, and examined in liquor potassæ, or, as was done with this particular specimen for convenience in mounting, in the saturated solution of the acetate of potash. In some other forms of dermatophytic disease, however, the recognition of a fungus is no easy problem, and the most careful investigation is necessary to insure success.

Dr. Tilbury Fox, in the last American edition of his work on Skin Diseases, New York, 1871, remarks:

"Many persons find the discovery of fungi in parasitic disease a difficult matter. The reasons for their non-detection are mainly as follow: 1st, from having too large a mass under examination. Thin sections or layers of epithelium or hair should be taken. 2d, the non-use of reagents to render the suspected tissues more or less transparent. 3d, too much manipulation. In this way spores are sometimes rolled up as it were in epithelial layers, or softened and altered by reagents and thus concealed. 4th, the presence of pigment in large quantity. 5th, ill selection of hairs and scales. We may possibly extract for examination a healthy hair which stands in the midst of diseased ones; diseased hairs are loosened in the follicle, and altered in texture, dry and brittle. 6th, the fungus may be left behind in the follicle, the hair coming away without it. 7th, secondary changes are often mistaken for the real disease; scales may result from the irritation of a fungus not in them, but in parts near, and its absence from the same scales is no sign that the parasite is not the indirect cause of the scalliness. 8th, the stromal minute form is mostly overlooked."

As before mentioned, the patient from whom was taken the fungus I have now beneath the microscope upon the table, had a syphilitic history, and only by

means of microscopic examination were we able to determine whether this eruption was specific in its character. Similar instances appear to be not unusual, for Dr. Fox observes, "I am constantly in the habit of seeing patients with Chloasma (*Tinea versicolor*) who have been treated vigorously for secondary syphilis. Such a mistake ought not to occur; it is generally when the chloasma is extensive that the error is made, but syphilis never produces a wide-spread fawn-colored staining like chloasma, and is never elevated and desquamating. The grand point of diagnosis between the two affections is the presence of the fungus in *Tinea versicolor*, and its absence in syphilitic disease."

As to treatment of this affection, the same author says, "I have one mode, and it is always successful. I apply a weak alkaline solution first of all, or wash with yellow soap, then sponge with a little weak vinegar and apply freely a lotion composed of four drachms of hyposulphite of soda and six ounces of water. A hyposulphite bath once or twice, if the case be obstinate, will aid somewhat; but I never require much else than this for any case."

Passing now to a more general consideration of the human parasitic fungous diseases, we are met at the threshold of our inquiry by the discussion of a very important and much-mooted point in phyto-pathology, analogous to that I have already mentioned as forming some twenty years since an epoch in the history of Scabies: to wit, whether the vegetable organisms revealed by microscopic examination are primary causes of the inflammation, the itching, the loss of hair, etc., which they accompany, or whether these lesions are the results of some constitutional malady, which gives rise also to such local pathological changes in the tissues as permit the accidental development of the parasitic organisms. A few moments' reflection will suffice to convince us that this question is one of exceeding difficulty, and in fact I think it must be admitted that we have as yet been able to establish only a very strong probability in favor of the former of these views. Among the most conclusive arguments in support of such a doctrine—to wit, that parasitic fungi are the causes and not merely the accidental concomitants of the disease in which they are found—may be mentioned: *First*, their eminently contagious nature, as proved by the experiments of Dr. Hughes Bennett, wherein the spores and mycelial threads of the *Acherion Schoenleinii* transferred from the head of a patient affected with Favus, produced that disease upon his own arm and upon those of several gentlemen among his students. *Second*, the fact that these maladies are not merely contagious, but also infectious, and may be conveyed from one person to another by means of the spores which float in the air for a distance of at least several feet. *Third*, the prompt subsidence of the malady when complete destruction of the fungous growth by means of parasiticides is effected; and last, but not least, the remarkable experiment of Dr. Tilbury Fox, in which he transplanted a hair which was plucked from a patient affected with ringworm, and contained a few fungus-spores, to the rind of a lemon, which furnished sufficient moisture to keep it alive and allow it in its turn to nourish the parasitic *Trichophyton* that it contained, until splitting up of the hair was effected,—thus actually producing the characteristic lesion of Ringworm out of the body.

Dr. Tilbury Fox further remarks that—

"There is no difficulty in accounting for the access of germs to living bodies, for these germs are freely distributed and disseminated through the air. The best illustration of this fact may be noted in the experiments of M. Borzin (*Gazette Méd. de Paris*, July 30, 1864), which consisted in passing currents of air over the head of a favus patient, and thence over the open mouth of a jar containing ice. The ice cooled the air, causing the deposition of moisture, in the drops of

which the acherion sporules were detected. The same thing may be shown by holding a moistened glass slip near the head of a patient, and just rubbing his scalp freely. Of course, actual contact is much more effectual in the implantation of germs. Let us suppose that the sporular elements find their way to the human surface; how do they get beneath the tissues? Various ways, probably. The fungus-elements may enter by fissures or natural orifices; for example, in ordinary ringworm the sporules lodge themselves at the opening of the hair-follicles, and presently get beneath the epithelial scales. The growing mycelial thread forces itself beneath the layers of the superficial tissues, processes may shoot out from the spores themselves and enter beneath the epithelium, the spores may be enveloped and carried bodily inwards, or enter by traumatic lesions, as is said to occur in Madura foot. In each and every instance the germs of parasites are derived *ab externo*, and not generated *spontaneously*.

"There is yet one category of facts that needs a word or two of comment,—viz.: the comparative pathology or the inter-transmission of parasitic (vegetable) maladies. It is now admitted that the transmission of the common ringworm of the surface, from animals to man, is very common. I am informed upon good authority that this is of very frequent occurrence in Australia, the milkers of cows, especially, being largely affected. Professor Gerlach has noticed it in dogs, horses, and oxen, and in man, but the sheep and pig seem to offer exceptions. Dr. Frazer (*Dub. Quart. Journ. of Med. Science*, May, 1865) contributed a paper,—'Remarks on a Common Herpetic Epizootic Affection, and on its Alleged Frequent Transmission to the Human Subject,'—containing cases. This gentleman quotes Mr. Brady and Mr. Whittle in reference to other instances. Dr. Fehr has noticed in Switzerland the transmission from cattle to man. I can confirm by my own experience the truth of these statements. Mice and cats affect man; mice with favus can communicate the disease to the cat, and the cat may give favus, or even *tinea circinata* subsequently, to the human subject."

Dr. R. Cresson Stiles reports in the New York *Medical Record*, vol. ii. p. 340 (1868), some interesting examples of *Tinea* observed in mice, from which the disease could readily infect cats and through them our own species, as probably took place in a case of Ringworm occurring some years since in my own practice.

But if, as is now generally conceded, fungous growths similar to that I have just shown you do flourish and produce disease whilst ramifying through and between the epithelial cells of the skin and of the mucous membranes, as in Aphthæ, what valid reasons can be *a priori* urged against a belief that they may also develop among the cellular elements of the connective and muscular tissues; or even, if we adopt Prof. Virchow's definition that the blood is "a tissue of cells with a liquid inter-cellular substance," why may they not live and grow more or less luxuriantly in the liquor sanguinis, especially as it slowly permeates the capillaries and smaller veins?

That such is actually the case I think we have a large amount of evidence to prove; and one of my objects in the present paper is to lay before you some of the accumulated testimony upon this point, leaving, with one exception, any deduction from the fact—if fact it is accepted to be—for future consideration.

Prof. Lionel S. Beale, whose antagonism to the so-called germ-theory of disease is so well known that few will decline to admit as literally true any statements he may make sustaining the views its advocates hold, observes on p. 66 of his late work entitled "Disease Germs: their Supposed Nature" (London, 1870), "In many very different forms of disease these germs of Bacteria and probably of many fungi are to be discovered in the fluids of the body, but the evidence yet adduced does not establish any connection between the germs and the morbid process. In Plate IV. these minute organisms are represented in the contents of the alimentary canal and in the interior of the epithelial

cells of the mucous membrane of the intestine in cholera. In the contents of the blood-vessels of the same disease, and in the blood taken from the vessels almost immediately after death of animals destroyed by cattle-plague and other fevers, similar bodies have been found, though probably not of exactly the same kind in every case.

... Sometimes these germs grow and multiply in a secretion not perfectly healthy before it has left the gland-follicles, and they have been detected in the milk as it issued from the breast, in the saliva, in the bile and urine, as well as in other secretions. It will no doubt be said in all these cases, 'the germs have been introduced from without,—they pass from the air into the orifice of the duct, and thus make their way to the gland. From this point they might readily pass into the blood.' But it is more likely they are in the blood and in the tissues at all times. They are met with in the blood especially in some instances in which there is no reason whatever for concluding they made their way into this fluid shortly before they were found. Nay, little particles may be seen in the circulating fluid which I believe to be these lowly germs, ready to grow and multiply whenever the conditions become favorable. I have seen such particles adhering to the surface of the white blood-corpuscles, and also to the red blood-corpuscles."

Prof. H. C. Wood, Jr., of this city, another able opponent of the germ-theory of disease, in his excellent article "On the Production of General Diseases by Organic Entities," remarks, "Whether the views of Prof. Wyman [regarding putrefaction] be correct or not, it is certain that under ordinary circumstances vibrios, etc. are always the accompaniments of putrefaction, and may frequently be found in a fluid before it has undergone more manifest changes. In the *milzbrand* of domestic animals and its probable derivative in man, *malignant pustule*, these bodies have frequently been found in the blood, but are said not to be present in all cases, and when present to be of fatal significance. *A priori* reasoning suggests that their spores are of very necessity at all times present in the blood; and the experiments of Frau Lüders seem to establish this. That lady took a small glass tube with the ends hermetically closed, which had been exposed for half an hour to a temperature of 290° C., and thrust it into the heart of a recently-killed guinea-pig and then broke off the ends. After the blood had been sucked into the tube from the other end, which was melted off to remove any fluid that might adhere from the lips, the ends of the tube were sealed, and it was kept at a temperature of from 13° to 15° C. After two days, fungous granules, chains, and rods were abundant. If then the spores of the vibronidæ be always present in the blood, they must of very necessity develop themselves whenever that fluid is strongly disposed to putrefactive changes, as it is in malignant pustule." (See *American Journal of the Medical Sciences*, October, 1868, p. 349.)

That some of the minute particles constantly found in normal human blood and partly constituting the globulins of Donné, the molecular substance of Griffith and Henfy, the microzymes of Dr. Burdon Sanderson and sundry French authors, and the germinal matter of Beale,—at least in his earlier writings,—present the aspect of fungous spores, and develop into Bacteria-like bodies, is shown by the following experiment, which I have repeated a sufficient number of times to convince myself that I have not been misled by any false interpretations of the appearances presented.

A drop of blood from the finger, drawn with careful precautions against adulteration, was covered with a large thin glass in such a manner as to include a few bubbles of air, and the whole hermetically sealed by a layer of gold-size applied at the margin of the covering glass. A suitable field of view being selected, containing between the *rouleaux* of red corpuscles several large

open spaces, in which could be seen with a $\frac{1}{25}$ -inch objective sundry of the tiny particles above referred to, each in active movement,—perhaps molecular in its character,—the slide was firmly secured in position, and careful observations and drawings were made at short intervals, except through the night, for three days, at the end of which period the minute granules first seen had developed to three times their original size, becoming about $\frac{1}{1000}$ of an inch long, assuming an elongated dumb-bell shape, and increasing in number so that the place of a primary particle would often be occupied by six, eight, or ten Bacteria-like bodies, sometimes irregularly grouped together, but quite frequently assuming the branching arrangement so characteristic of the jointed mycelia of the lower vegetable organisms.

A series of my own experiments performed to demonstrate the presence, mode of entrance, and pathological effects of Bacteria in human blood, were detailed in the *American Journal of the Medical Sciences* for July, 1868, from which I extract the following as the most important:

"Experiment 4.—At 7.45 P.M., May 17, 1868, I drank four fluidounces of water similar to that employed in the preceding investigations, and containing multitudes of bacteria (estimated as numbering 27,000,000,000). At a quarter-past eight I examined a drop of blood drawn with a cataract-needle from the tip of my finger, and confined between a slide and cover cleaned with strong hydrochloric acid as above described. Under the field of the one-twenty-fifth-inch glass the interspaces between the rows of blood-corpuscles were found to contain multitudes of apparently spherical molecules, in rapid and erratic motion,—but so very minute as to readily escape notice even with this high power, except under the closest scrutiny; in the course of half an hour not less than one hundred were observed. At 9 P.M. another drop of blood, examined with the same precautions, exhibited, in addition to these minute particles, other bodies, less active in their movements, of much greater magnitude, and which under an amplification of eleven hundred diameters appeared precisely similar to the bacteria I had been studying a few hours before in the identical decomposing beef-juice imbibed.* Five of them were thus enlarged sufficiently to exhibit an unmistakable organized structure totally different from their associated aggregations of Beale's germinal matter. Three of these bacteria were each about $\frac{1}{2000}$ of an inch in length and $\frac{1}{2500}$ of an inch in width, very distinctly constricted in the middle; a fourth was obviously composed of four, and a fifth of six joints arranged in a straight line, whose motion was of that peculiar waving character so universal among the Oscillatoriaceæ. The last two were most clearly visible when they happened to lie vertically to the surface of the glass, and would probably escape observation under the one-eighth-inch except in that position, or be therefore mistaken for simple globular bodies, although in several cases I detected in the second and third experiments (with a lower power) a shadowy elongation of one diameter on the revolving molecules thus observed."

These results which I obtained were not confirmed during a repetition of my experiments made partly under the supervision of Col. J. J. Woodward, of the Army Medical Museum at Washington, but which were not, as has been stated by him, uniformly without any effect; and although such evidence must of course be allowed to have for negative testimony unusual weight, it should, I think, be viewed in conjunction with the observations of Dr. Neftel, of New York City, and M. E. Semmer, of Dorpat, whose researches go far to confirm my conclusions.

Dr. Neftel remarks (see *Medical Record*, July 15, 1868, p. 226), "Finally, I may mention the experiments which I myself made last year in Prof. Virchow's Pathological Institute and Dr. Kühne's Chemical Laboratory, and which I still continue. My object was to study the

* Careful and repeated observations had of course been made to establish the fact that similar particles were not visible in my blood immediately before drinking the bacteria.

influence and mode of action of cryptogams in the animal body. For this purpose I produced a fistula of the small intestines in dogs, and through it introduced the fungi. I also injected cryptogams into the respiratory organs of dogs and rabbits by means of tracheotomy; again I injected them hypodermically; into the veins; into the abdominal cavity; and at last I introduced them into the lymphatic sacs of frogs and observed by Cohnheim's method;" and, after giving a detailed account of particular investigations, he observes, "My experiments so far lead me to the conclusion that the lower vegetable organisms can continue to live and multiply in the tissues of living animals, and that they can enter into the general circulation either through the intestinal canal or respiratory organs or by means of hypodermic injections. What is their ultimate fate in the animal organism, and what their importance in producing disease, further investigations will have to show."

In further corroboration of my researches I may quote the experiments of M. E. Semmer, Prosector to the Veterinary Institute of Dorpat, described in his paper on the "Results of Injection of Fungous Spores and Fungous Cells into the Blood of Animals." This gentleman states that whilst in the blood of creatures affected with glanders, splenic inflammation, and septicæmia, micrococcus cells, mycothrix- and leptothrix-chains and threads are common, the circulating fluid of healthy beasts contains generally a few similar cells, and analogous rods and chains are to be met with in the liver and intestine. He also details three series of experiments made to test the question whether these contagious diseases were caused by the fungi found in the blood, and fully narrates the post-mortem examination of a foal into whose jugular vein was injected about two ounces of distilled water containing countless fungus-spores and micrococcus-cells, cultivated from splenic disease (*milzbrand*) blood upon boiled material, the poisonous dose causing the death of the animal on the eleventh day, preceded by loss of appetite, tottering gait, and marked febrile action. (See *Virchow's Archiv*, fünfzigsten Band, erstes Heft, S. 159, Berlin, 16. April, 1870.)

Influenced, therefore, by the positive statements of Drs. Lionel S. Beale and H. C. Wood, Jr., and the direct observations of M. Davaine, Dr. Neffel, and M. E. Semmer, as well as by the results of my own personal investigations, I think we must admit that Bacteria not only live but flourish in the blood of animals and of man with more or less frequency during the course of various maladies; yet whether by so existing in the circulating fluid these vegetable organisms constitute causes of disease, or whether they are simply products, or, again, mere accidental accompaniments of morbid action, it appears to me we have not hitherto accumulated a sufficient number of *facts* to enable us to decide.

Hence I think the profession is as yet unprepared to accept the doctrine of Dr. A. E. Sansom in his late work, "The Antiseptic System," London, 1871, p. x., where he says, "From a review of all the facts and observations I have been led to enunciate the theory that the poisons of spreading diseases are extremely minute living organisms, having the characteristic endowments of vegetable growths analogous to the minute particles of vegetable protoplasms whose function it is to disintegrate and convert complex organic products, owing their specific properties in special diseases not to any botanical peculiarities, but to the characters implanted in them by the soil in which they first sprang from innocuous parents, and from which they are transmitted,—this soil, except in the case of their earliest origin, being the fluids of the animal body."

In order, however, that such researches as those above referred to may be made, even in their present incomplete state, to aid us in improving the science of medicine, permit me to suggest that each Bacterium existing

in the blood (whether as a poisonous cause, a product, or an accident of disease, I refrain from discussing at present) must during every moment of its life appropriate some minute portion of pabulum, which would otherwise have contributed to nourish the tissues of the animal in which it resides; and that therefore the sum total of the Bacterian influences (unless they feed solely upon effete matters, unlike their analogues of the dermatophytic affections) *must* be effective towards diminishing the vital power of the organism on whose life-blood they prey.

This view is confirmed by the experiments of Dr. Burdon Sanderson in his late interesting memoir "On the Origin and Distribution of Microzymes [Bacteria] in Water, and the Circumstances which determine their Existence in the Tissues and Liquids of the Living Body," in which he says, "As regards their [the Microzymes'] action on the liquids in which they live, the most important facts are (1) that their growth is attended with absorption of oxygen and discharge of carbonic acid; (2) that they are remarkably independent of the chemical constitution of the medium, provided that they are supplied with oxygen; and (3) that they take nitrogen from almost any source which contains it, and use it for building up their own protoplasm. It is this last power which specially indicates what may be called their place in nature, as the universal *destroyers* of nitrogenous substances, acting as the pioneers, if not the producers, of putrefaction. They exercise this function, not by virtue of any special relation of their own nutritive processes to putrefaction as such, but simply by their extraordinary power of seizing on the elements which they require for the construction of their own bodies." (See *Quarterly Journal of Microscopical Science*, October, 1871, p. 326.)

Upon this doctrine it is not difficult to found a theory for explaining the probable mode of operation of quinine and arsenic,—so long a problem in therapeutics,—when acting as tonics upon the human system in many cases of disease: namely, that in part, at least, they serve their important purpose by rendering the blood less fit for the development of these lower organisms, and in this way *economizing* the supply of nutritive material in the circulating fluid. Many well-known peculiarities in the action of these two principal tonic medicines tend to confirm such a belief,—as, for example, the facts: *First*, that quinine and arsenic, two substances which, although unlike in almost every other respect, resemble each other, as shown by the experiments of Dr. Binz of Bonn and Dr. Dougall of Glasgow, in being powerfully inimical to vegetable life, are in many cases our most reliable tonics. *Second*, that, as a general rule, three or four days must elapse before a decided invigorating effect is produced upon the system by these remedies,—a period which, we may conclude, is requisite for sufficiently impregnating the blood (without disturbing the digestive organs) to render it an unfavorable medium for the growth of Bacteria. *Third*, that after a continuance of some weeks these roborants generally lose their invigorating power upon any particular patient, but seem to have regained it if recommenced after their administration has been for a short time interrupted,—i.e. subsequent to the development of a new crop of Bacteria, which they again destroy. And *Fourth*, that arsenious acid has so remarkable an effect upon the arsenic-eaters of Styria, producing such fat, vigorous, and pure-complexioned individuals when steadily continued, and giving rise to such intense suffering if omitted for a short time; results which can hardly be owing to the arsenical preparation supplying any necessary constituent of the human body, and which seem much more probably to be due to some action in preventing a waste of nutriment, and consequently of vital power.

ON THE FIRST INSENSIBILITY FROM ETHER.

BY JOHN H. PACKARD, M.D.,

One of the Surgeons to the Episcopal Hospital, Philadelphia.

WHEN the vapor of sulphuric ether is inhaled, there is, as is well known, an early stage of complete muscular relaxation, in most cases soon succeeded by an excitement, which in turn gives way to the complete unconsciousness which is so desirable for protracted surgical procedures. It is not, however, so generally known that the muscular relaxation just mentioned is attended with entire anæsthesia. Advantage may be taken of this fact to perform many operations which, although intensely painful, occupy but a moment of time,—such, for example, as the opening of whitlows or other abscesses. In this way much time is saved to the surgeon, while the patient is spared not only the suffering of the knife, but the vomiting, headache, and tedious return to consciousness which are so apt to follow the protracted administration of ether.

Again, when it is decided to dispense with anæsthesia, it often happens that the incisions made are not free enough,—either because the patient resists, or the surgeon shrinks from giving pain; or it may be that the former cannot at first summon up his fortitude, and the operation is delayed until serious mischief has occurred, which might have been avoided by its earlier performance.

In large cities it is, of course, often easy to resort to the use of nitrous oxide, administered by those who make it a business; but in office practice, and in the country, the same end is gained by giving a small dose of ether. It is not even necessary to have an assistant, except in the case of children, or of very timid persons, who have not the force of will to follow out the directions given them. Generally the whole affair may be managed easily, as follows:

Let the patient lie on a sofa or reclining-chair, and take in his own hand a folded handkerchief or towel, with about $\frac{1}{2}$ ss of ether poured over it. He should be instructed to breathe out strongly, and then to apply the inhaler at once, firmly, to his face, and to hold it there. He may be told also to raise up his other hand, and his attention repeatedly directed to keeping it up. As soon as the hands fall, the surgeon, having everything previously in perfect readiness, promptly accomplishes his object, and the patient is at once allowed to "come to."

Sometimes it is better for the surgeon himself, or an assistant if one is to be had, to manage the towel or other inhaler, the patient being told to concentrate his attention upon holding up one or both hands.

To those who are already acquainted with this "dodge" and with its value in the opening of abscesses, the reduction of dislocations, the introduction of instruments into the bladder, etc. etc., no apology can be necessary for this communication. I trust that some who have not hitherto known of the plan may be induced to try it, and may find it as useful as it has been to me.

PHYMOSIS WITH ADHESION OF THE PREPUCE TO THE GLANS PENIS FOR NEARLY ITS WHOLE EXTENT.

BY A. W. WIGGIN, M.D.,

Assistant-Surgeon U.S. Army.

THE following case has recently come under my observation, and seems to be of sufficient rarity to be put on record:

J. R., a native of Prussia, aged 38, consulted me in September last for gonorrhœa. I found the prepuce quite long, indurated, and with an orifice not over one-sixth of an inch in

diameter. Suspecting balanitis, as the discharge was slight, I tried to introduce injections underneath the foreskin, but found that they apparently went back no further than the meatus. On questioning him, he stated that he had been able to retract the foreskin prior to the age of 12 or 14 years, but not since then. At that time he "took cold" in his penis, the parts swelling and suppurating. He has had repeated attacks of this difficulty—evidently balanitis—since then; but, though suffering a good deal during the attacks, and latterly experiencing constant trouble in urinating from the contraction and induration of the prepuce, he has neglected heretofore to bring his case to the attention of a physician.

He further stated that he had never before had any venereal disease.

On introducing a probe, I found I could carry it in any direction but little beyond the meatus.

After the cure of the gonorrhœa I removed the redundant prepuce as far back as the meatus urinarius, slitting up the mucous membrane as in the ordinary operation for circumcision. The prepuce was firmly adherent to the glans, the exposed portion of the glans measuring not over half an inch in diameter.

Though instances of similar adhesions are not rare, I have never seen a report of one, not congenital, so extensive as this.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

CLINIC OF PROFESSOR AGNEW.

Reported by Dr. ELLIOTT RICHARDSON.

TUBERCULOUS DISEASE OF TESTICLE.

THIS patient was brought before the class at the clinic held September 27, 1871, and gave the following history.

Swelling of the testicle was first observed by him some time during January, 1871. This swelling increased slowly, and until last July was unattended by pain. At that time, however, pain supervened, and had continued ever since, becoming so severe as to require the constant use of a large amount of anodyne to procure the necessary rest.

The tumor had also increased more rapidly since the advent of pain. The patient was suffering at this time from severe aching at the lower part of the back and abdomen.

The tumor at this date was quite large and regular in outline; it was heavy and elastic, and sensitive to the touch. There was no involvement of the lymphatic glands of the groin, nor was there any increased sensibility of the cord. The pain, the rapidity of growth, the weight, and the elastic feel of the tumor, Prof. Agnew said, were symptoms indicating carcinoma; but the immunity of the lymphatic glands, and the absence of evidence of disease of the cord and of any hereditary history of cancerous disease, were symptoms pointing in a different direction. The cachectic appearance of the patient, who was pale and emaciated, was probably due to prolonged suffering. But whatever might be the nature of the diseased growth, its removal was clearly indicated.

The prognosis, however, would vary much with the character of the disease. If carcinomatous, the lecturer said, the growth would probably return after removal; if tubercular, though liable to recur, it might not do so; but if cystic, removal would probably produce a permanent cure. An exploring-needle was introduced, and a drop or two of bloody serum escaped through the groove. The patient was then etherized, and Prof. Agnew proceeded to operate. A long longitudinal incision was made over the anterior surface of the tumor through the integuments. On cutting into the tunica vaginalis testis a little serum was found in its cavity, and also a few adhesions between its surfaces. On the surface of the tumor, beneath the inner layer of the tunica vaginalis, a small clot of blood—the remains of a previous slight hemorrhage—was seen. The veins of the testicle were now seen enlarged, and ramifying beautifully over the surface of the tumor.

The operator, after carefully dissecting the cord up, put a pin under it at this point, and ligated the cord by passing a

loop of silk ligature over one end, bringing it over the cord and tying it firmly under the pin on the opposite side. He said that this was preferable to simple ligation, on account of the opportunity it afforded to the operator to remove the ligature by withdrawing the pin about the fifth day, without waiting until the cord had sloughed through, and thus prolonging the cure. The testicle was then dissected out, and five small bleeding vessels ligated. The wound was closed by silver sutures and adhesive strips, and dressed with simple cerate, to be replaced the following day by laudanum largely diluted. The lecturer said that great care should be observed to tie every bleeding vessel in wounds in tissues of this nature, on account of their loose character, rendering the occurrence of hemorrhage from very small vessels very liable to follow, and of the difficulty in controlling this hemorrhage by compression.

The tumor after removal measured 3 inches by 4 inches in diameter, and was apparently tuberculous in its nature.

October 4, 1871.—A microscopic examination of the tumor removed from this patient has confirmed the diagnosis of tubercular disease made at the time. Laudanum and water have been used as dressing throughout the case. The wound is now granulating nicely, with no borrowing and little discharge.

October 10, 1871.—The wound has healed very rapidly, and with little suppuration. The patient still suffers much from pain in the back; that in the lower part of the abdomen has disappeared. The thickening about the abdominal ring has also disappeared. A small patch of granulations only remains, the rest of the wound having cicatrized, and he is to-day discharged from the ward.

PARALYSIS FOLLOWING LUXATION OF THE HUMERUS.

At Prof. Agnew's clinic, October 4, 1871, a man 50 years of age was exhibited, suffering from partial paralysis of the arm. This paralysis was the result of pressure of the head of the humerus upon the nervous trunks in the axilla, consequent upon a luxation of that bone, which was reduced at the University in the month of June last. As a result of this paralysis the arm had become somewhat atrophied.

He had had the galvanic current passed through the arm twice a week for some time, and a decided improvement was noticeable. The remedy was directed to be continued, and it was believed that under its use the arm would be perfectly restored.

VARICOCELE.

This patient was a young man 20 years of age, who had varicocele of the left side largely developed. Prof. Agnew, in alluding to the differential diagnosis of tumors occurring within the scrotum, said that varicocele resembled hernia in being augmented in size by coughing, in being larger while the patient is erect, and in disappearing when he assumes a recumbent posture; but if, after the tumor has disappeared, pressure is made upon the abdominal ring, instead of a return of the tumor being prevented, as would be the case in hernia, it is found in varicocele to recur, and even to become larger and more tense than when no obstruction is offered to the return of blood from the scrotal contents. The physical properties, also, of varicocele are usually different from those of other tumors of the scrotum. It is more irregular than any other, and gives to the finger very much the sensation of a bundle of earth-worms.

Varicocele nearly always occurs on the left side, on account of the return of blood to the cava through the spermatic vein being less free upon this side, from absence of valves. By its weight dragging upon the cord it often produces severe pain, extending along the cord to the back, and down upon the leg of the affected side. This can usually be remedied by supporting the scrotum in a suspensory bandage.

Prof. Agnew said he did not consider any operation called for in cases of this character, unless other measures failed to relieve the pain, or the patient's mind was so much disturbed by anxiety (often so great in affections of this part of the body) as to render obliteration of the enlarged veins a necessary measure. In this case the operation preferred is the subcutaneous ligation of the veins.

The lecturer said that although in the patient before us the varicocele was large, yet, as he suffered little inconvenience

from it, he would advise bathing the scrotum twice a day with cold water, and the constant use of a suspensory bandage. These measures are only palliative, and a cure is not to be looked for from them.

WILLS OPHTHALMIC HOSPITAL.

SERVICE OF GEORGE C. HARLAN, M.D.

Reported by CHARLES K. MILLS, M.D.

HYPERMETROPIA.

C. C., æt. 15, could see well at a distance, but could not read or use his eyes for near work, even for a few moments, without pain and fatigue. He exhibited the typical hypermetropic physiognomy and structure of eye. His eyes were small, the sclerotic flat, and the whole face had a flattened appearance. By the ophthalmoscope, the fundus of each eye was discovered to be normal.

His acuteness of vision was normal. $V = \frac{20}{XX}$.

After paralysis of the accommodation by atropia, he was found to have a total hypermetropia of $\frac{1}{5}$ in each eye. He was ordered convex glasses of six-inch focus, which enabled him to attend to near work and school studies without any difficulty.

An interesting feature of this case was the patient's remarkable power of accommodation. He could read No. XX Snellen at twenty feet, either with or without his $+\frac{1}{6}$ glasses.

THREE CASES OF LACHRYMAL OBSTRUCTION.

A. D., æt. 20, three months before applying for treatment, had a severe attack of conjunctivitis in the left eye, caused by exposure to cold and wet. The inflammation extended to the lachrymal apparatus, and resulted in lachrymal abscess, with a discharge of pus through the lower punctum. The eye was weak, watering, and subject to frequent attacks of slight conjunctivitis; but, as there was no considerable epiphora, it was decided not to operate.

She was ordered internally five grains of iodide of potassium three times daily; and an eye-wash of one grain of sulphate of zinc to an ounce of distilled water. Tincture of iodine was applied three times a week over the lachrymal sac. In three weeks, under this treatment, all inflammatory symptoms had subsided, and the tears passed freely through the duct.

M. C., æt. 25, had been troubled with her right eye for three years; the left was unaffected. From the account of the patient, the lachrymal duct of the right side had evidently been more or less obstructed during this time. She had no serious difficulty, however, until two months before coming to the hospital, when the eye became very painful and intolerant of light.

When first seen, there was an abscess of the lachrymal sac, with a fistula at its upper portion, discharging pus and tears; and there was also considerable swelling of the same side of the face. The canaliculus was slit up, and Bowman's probes were afterwards introduced every other day, commencing with one of the lower numbers and gradually increasing the size. The fistula closed three days after the commencement of the treatment, and the case is progressing satisfactorily towards a cure.

W. H., æt. 14, one year back had suffered from lachrymal obstruction of the right eye, from which he recovered, without active treatment, in about a month. One week before he presented himself for treatment, his right eye again became much inflamed, and tears ran over his cheek. It was found that a large lachrymal abscess had formed. The abscess was evacuated by slitting up the lower canaliculus, and a poultice was applied. Two days afterwards the swelling and inflammation were much reduced, and dilatation by means of Bowman's probes was commenced, and continued every other day. Two weeks afterwards the case is still under treatment, but nearly well.

RETINITIS PIGMENTOSA.

F. S., a German, æt. 18, complained of dimness of vision. He said that he could go about pretty well in the daylight, but was helpless in the evening. His eyes had been getting gradually worse for five years. They were occasionally pain-

ful. His general health was good. No syphilitic history and no hereditary tendency to disease of the eye could be traced.

He had an acuteness of vision in each eye of $\frac{12}{xxx}$. He could read No. 3 Snellen at from 10'' to 16''. His field of vision was remarkably contracted; at a distance of two feet its greatest extent was two inches for the left eye, and four inches for the right. All beyond these limits was complete obscurity to the patient.

By the ophthalmoscope, the retina of each eye was found covered with dots and patches of pigment, except immediately in the region of the macula lutea.

An unfavorable prognosis having been given, the patient concluded to return to his friends in Germany.

CHRONIC CYSTITIS TREATED BY ESTABLISHING A VESICO-VAGINAL FISTULA.—The report of this case, which originally appeared in *The Clinic* for November 4, has been introduced, together with the correspondence to which it gave rise, in the January number of *The American Practitioner*. It is as follows:

"Mrs. — has suffered from cystitis for three years, in which time she has gone the usual round of treatment, both constitutional and local, without experiencing the least benefit. Two weeks ago, the patient being under the influence of chloroform, and lying upon the left side, knees and chin being approximated, the perineum being drawn back with a Sims' speculum, a curved trocar was passed along the urethra and caused to penetrate the vesico-vaginal wall just beyond the vesical meatus, and through the opening thus made the blunt blade of a pair of scissors was passed into the bladder, and an incision nearly an inch in length, directly in the median line, was made. When the hemorrhage, which was not great, had ceased, a tube somewhat larger in diameter than a female catheter, half an inch in length, and provided at either extremity with a perforated "button," was inserted into the opening. The buttons of course were to secure it in position, one being within the bladder, the other in the vagina. The former was concave in the face looking towards the vesical cavity.

"The bladder is syringed out at least once daily with a large quantity of warm water through the tube, using an ordinary Davidson's syringe, but having adapted it to a curved tube eight inches in length, slightly bulbous at its extremity, which has five perforations; this tube readily entering the vesico-vaginal tube, and permitting the escape around it from the bladder of the injected water. Thus far the condition of the patient has been decidedly improved, and there is every reason to hope that in the course of six or eight months, by the rest given the bladder and the faithful use of warm-water injections, she will be cured, and then the fistula can be readily closed."

Dr. Keyt, of Cincinnati, wrote to *The Clinic* that he considers the operation above detailed an unjustifiable one, on account of the hemorrhage and urinary infiltration which are very apt to ensue, and that it is moreover unnecessary, since the urethra affords in his opinion every facility for carrying out the indications for treatment, and no good reason can be given why cystitis should not be as well treated through the urethra as through a fistulous passage.

Dr. Thos. A. Emmet, on the other hand, in a letter to *The American Practitioner*, fully sustains Dr. Parvin, saying that the loss of blood under these circumstances is exceedingly trifling, and that the danger of urinary infiltration is entirely theoretical, from the fact that it can only take place with an accumulation in the bladder, and the object of the operation is to avoid this.

THE TEETH AND MOUTH IN IDIOTS.—Dr. Langdon Down has recently read a paper (*British Medical Journal*, December 23) before the Odontological Society, in which he insists on the importance of an examination of the mouth and teeth of idiots as a means of determining whether idiocy is congenital or acquired; an abnormal formation of these parts being, in his opinion, an indication that the affection is congenital. The lips, especially the lower, are usually thick; they are often deficient in prehensile power; the mucous membrane is very liable to chronic inflammation, and to ulceration from very slight pressure; and the mucous and

salivary glands are usually hypertrophied. The first dentition is almost invariably postponed; sometimes it is attended with no disturbance of the general health, sometimes with violent convulsive attacks. The milk-teeth are frequently dark, and quickly become carious; and their stunted growth is often rendered more stunted by incessant grinding, which is very common in idiotic infants. The evolution of the permanent teeth is often postponed, and the sequence is slightly irregular. They are often crowded, so that sometimes the sides are presented. They are often arranged in different planes; sometimes the canines, sometimes the incisors, are most prominent. The enamel is imperfect, giving a honeycombed appearance, and they speedily decay. Dr. Down has been able to discover among the feeble-minded very few examples of the syphilitic teeth described by Mr. Hutchinson, and he considers this state to be quite distinct from the honeycombed teeth which he describes. The tongue is often unusually large, being elongated and deficient in muscular power and co-ordination. The surface is often corrugated; and the papillæ are hypertrophied, producing roughness. The condition of the palate is of most significant value. From a very large number of measurements, Dr. Down finds that, with a very few exceptions, there is a marked narrowing of the distance between the bicuspid on the two sides, with a consequent inordinate vaulting of the palate,—the line of junction of the palate-bones occupying a higher plane. In the exceptional cases the palate was wide in excess. The posterior part of the hard palate is often deficient, so that the soft palate hangs down abnormally. Cleft palate, in Dr. Down's researches, did not occur in more than five cases in a thousand.

THE PHYSICAL THEORY OF VITAL PHENOMENA.—Dr. Pavy (*Lancet*, December 2, 1871) explains and illustrates the physical theory of life with clearness. Premising with the fact that in the living organism there are influences at play which have no existence in the dead matter around, he says that this does not conflict with the extension of the law of conservation of energy to living nature. The effects produced may have their origin in the physical forces, the living matter forming the medium through which they operate. A disarranged machine may be compared with living matter devitalized. In both the capacity of being set in operation by force has existed, and in both the capacity has been lost.

The force evolved in muscular action has its source in the material supplied to the body in the form of food. Now, all food comes primarily from the vegetable kingdom, and vegetable products are built up through the agency of the sun's rays. And it may be said that the energy which, contained in these rays, has been employed in producing the compound is fixed or rendered latent within it. The formation of vegetables is coincident with the disengagement of oxygen from oxidized principles, and the development of combustible compounds. To effect this disengagement the operation of force is required. Now, the force so employed has its source in the heat and light of the sun, and that which is used for the purpose may be said to become fixed or latent,—stored up ready to be again liberated when exposed to conditions of oxidation. Thus may these vegetable products, which become directly or indirectly the food of man, be compared to a bent cross-bow, containing as they do a store of latent force which may for an indefinite period remain such, or may be liberated soon after it has become fixed. Whenever liberated, it is no more nor less than the equivalent of the force which has been used in the formation of the product. Our coal-fields represent a vast magazine of force drawn ages ago from the sun's rays, and capable at any moment of being set free by the occurrence of oxidation.

ENCEPHALOID DISEASE OF THE KIDNEY OCCURRING IN A CHILD ONLY TWO AND A HALF YEARS OF AGE.—Dr. J. C. Wilson gives the history of a case of this kind in *The Medical and Surgical Reporter* for December 16. There was an almost total absence during the life of the patient of any indications of the constitutional nature of the disease, hæmaturia being the only symptom which could not be referred to mechanical pressure of the tumor, which it was estimated weighed twenty pounds. A fungoid tumor of about three ounces in weight was found attached to the lower lobe of the left lung by a distinctly-formed neck.

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EDITORIAL.

DIPLOMA-MANUFACTORIES.

WE learn from *The Doctor* that there are three different advertisers in the London daily newspapers who profess to be accredited agents of the American University of Philadelphia. Each of the agents offers to procure the degree of M.D., LL.D., or M.A. One party offers the Doctorate in Divinity, Physic, or Law, for twenty guineas; another wants only fifteen. The prospectus of the University says the Institution "has a special claim upon the progressive portion of the medical profession, being the most liberal Medical College of the age;" and adds that the hospitals of the city are open to its pupils. To the prospectus are appended these names:

Joseph Sites, Dean of the Medical Faculty of the College;

John Buchanan, M.D., Dean of the University.

The Doctor says, in conclusion, "Now, we want to know whether the American University of Philadelphia is a recognized Institution. Has it legal authority to grant degrees? If so, ought it not, according to the law of the State, to be deprived of this power?"

The institution above alluded to is unquestionably the Eclectic Medical College of Pennsylvania, which occupies a building at 514 Pine Street, and the scandalous proceedings of which in reference to the sale of diplomas has been fully exposed by two or three of the daily newspapers of our city, and also in the *New York Tribune*. It claims to have been organized in 1842, to have been incorporated by the Legislature in 1852, and to have been created a University in 1867. As the Legislature is always ready to grant a charter to any institution which may apply to it, and as it rarely troubles itself about the use which is to be made of a charter, we do not doubt that the Eclectic Medical College of Pennsylvania is really incorporated, and that it has authority to confer degrees. That these are advertised for sale there also cannot be the slightest doubt. In regard to the last of the three questions which our London contemporary asks, we reply that it is the duty of the State Legislature to withdraw a power which it has conferred and which has been used for bad purposes; and we are glad to hear that, through the representations of the secular press and the exertions of a few gentlemen, among whom are the members of the Medical

Faculties of the University of Pennsylvania and of the Jefferson Medical College, the matter has been brought to the notice of our legislators in such a manner that they cannot avoid taking official cognizance of it.

A few weeks since, a committee was appointed by the Legislature to investigate the alleged sale of diplomas. This committee met on Saturday, February 3, in this city, and took the testimony of the following gentlemen: Charles J. Stillé, LL.D., Provost of the University of Pennsylvania; Dr. R. E. Rogers, Dean of the Medical Faculty of the University of Pennsylvania; Dr. B. Howard Rand, Dean of the Jefferson Medical College; Dr. S. W. Butler, editor of the *Medical and Surgical Reporter*; and Mr. George W. Fairman.

We quote a portion of the Provost's evidence, as reported in the *Evening Telegraph* for February 3:

"I have evidence to show, first, that there have been advertisements inserted in a number of English papers, offering to procure, for those who should apply, academic degrees of various kinds, from the American University of Philadelphia and University of Philadelphia. As Provost of the University of Pennsylvania, I took an interest in endeavoring to ferret out the truth of these charges. I have received a large number of letters from persons in England on this subject. [Dr. Stillé then read letters from Dublin, Tyrone, Ireland, London, Yorkshire, and Glasgow, all stating that the writers had been approached, both by notes and by word of mouth, and told that if they would pay certain sums they could receive from these agents degrees from any one of the universities of Philadelphia. They moreover stated that there were in England hundreds of persons claiming to be graduates of the Colleges of Philadelphia, and who secured their diplomas by the payment of money. The Provost presented a great accumulation of papers from far and near, containing statements about the sale of the diplomas, and communications indirectly proposing their sale, signed by Professors Sites and Buchanan, of the Pine Street College.—REP.]"

Dr. Rogers testified to the same effect, saying that he had positive evidence that in the South merchants are in the habit of obtaining these diplomas for a consideration so small that when they sell them, as they soon do, they make a considerable profit on them.

Dr. Rand said,—

"During last summer, I think in June, I had a visit from a gentleman who brought me a letter of introduction from Mr. George W. Fairman, in which he stated that he was a Professor of Toxicology and Chemistry in the Pine Street Medical College. This gentleman said that, notwithstanding the recent act of the Legislature making it a penal offence to sell diplomas, they were still being sold at that institution, and also at the institution known as the Philadelphia University. He proposed that if I would advance him \$100 because of the risk he ran, or guarantee him \$200, he would bring me a diploma from each institution, made out in the name of a deaf, or blind, or dumb man or child. I told him I had no authority to do so, and I would lay the matter before the Faculty of our College; I did so, and they declined to act in the matter. This gentleman's name is J. Dunbar Hylton. There are two members of our class that were offered these diplomas, and I have given their names to your sergeant-at-arms, in order that they may be brought to testify."

The existence of these bogus institutions for so long a time has been a disgrace not only to our city, but to the State; for, besides inundating the country with a host of M.D.s who have either bought their diplomas or have studied medicine very imperfectly and under great disadvantages, they have in some cases drawn into their net young men who have come to Philadelphia with the intention of matriculating at the University of Pennsylvania or at the Jefferson Medical College and have been misled by the announcements of these institutions, as is shown by Dr. Rogers' testimony before the committee, that several young gentlemen had come to him, representing that they had purchased in the South and Southwest what were called scholarships for from \$35 to \$75 each, under the idea that it was to the University of Pennsylvania that they were really paying their money. The assumption of the title, in the one instance, of the American University of Philadelphia, and, in the other, of the Philadelphia University of Medicine and Surgery, certainly justifies the suspicion that it was done in order that they might be mistaken for the University of Pennsylvania.

The announcement of the Eclectic Medical College, in addition to setting forth the great advantages which it offers to its students, says that these have access to the clinical lectures delivered at the Pennsylvania Hospital. This, we are glad to be able to say, is no longer true. The Managers of the Hospital have given the members of the medical and surgical staff the power to exclude the students of any medical institution that they may please, and, acting under their directions, the Steward of the Hospital has declined to issue tickets to students of the Eclectic Medical College. This action on the part of the staff has called forth a note from the Dean, who must be a gentleman of most refreshing coolness. The note is as follows:

"DEAR SIR:—You have intimated to our students that they cannot attend the Pennsylvania Hospital,—a State institution, which we aid in supporting. Before applying to the court for a mandamus, I merely desire to know if you persist in their exclusion. Please inform bearer.

"Very respectfully, JOSEPH SITES, Dean."

The only reply made by the Steward to this threatening epistle was that Dr. Sites was correctly informed; and up to this time no legal measures have been taken, so far as we are aware, to force the hospital to open its gates to the doctor's protégés. The Pennsylvania Hospital is not a public institution, but is supported entirely by voluntary contributions; but, even taking the view of it that Dr. Sites does, we cannot imagine how the Eclectic Medical College can possibly aid in its support, or in the support of any of the public institutions of the city; and the note is simply a piece of bravado, and was so regarded by the gentleman to whom it was addressed.

It has been usual to grant certificates of attendance to all students who have taken the hospital ticket; but, as there is evidence that these certificates have been made to serve for diplomas, the staff has determined to issue them only to the students of the regular colleges.

THE MEDICAL DECLARATION AGAINST ALCOHOL.

THE recent English medical journals contain the following medical declaration respecting alcohol, signed by many of the leading physicians and surgeons of London and of the provinces. The publication of this paper, which is said to have emanated from Dr. Burrows, the President of the Royal College of Physicians, has, as might have been expected, renewed the discussion in regard to the use of this substance by physicians in the treatment of disease.

The declaration is as follows:

"As it is believed that the inconsiderate prescription of large quantities of alcoholic liquids by medical men for their patients has given rise, in many instances, to the formation of intemperate habits, the undersigned, while unable to abandon the use of alcohol in the treatment of certain cases of disease, are yet of opinion that no medical practitioner should prescribe it without a sense of grave responsibility. They believe that alcohol, in whatever form, should be prescribed with as much care as any powerful drug, and that the directions for its use should be so framed as not to be interpreted as a sanction for excess, or necessarily for the continuance of its use when the occasion is past. They are also of opinion that many people immensely exaggerate the value of alcohol as an article of diet; and since no class of men see so much of its ill effects, and possess such power to restrain its abuse, as members of their own profession, they hold that every medical practitioner is bound to exert his utmost influence to inculcate habits of great moderation in the use of alcoholic liquids. Being also firmly convinced that the great amount of drinking of alcoholic liquors among the working-classes of this country is one of the greatest evils of the day, destroying, more than anything else, the health, happiness, and welfare of those classes, and neutralizing, to a large extent, the great industrial prosperity which Providence has placed within the reach of this nation, the undersigned would gladly support any wise legislation which would tend to restrict within proper limits the use of alcoholic beverages and gradually introduce habits of temperance."

The comments of the medical press are by no means entirely favorable to it. The *British Medical Journal* and *Medical Press and Circular* praise it, but the *Lancet* and *Medical Times and Gazette* condemn it. Dr. Anstie, who withholds his name, gives his reasons for doing so in full in *The Practitioner*. In the first place, he says, it is both a false and a mischievous idea that any considerable percentage of the drinking-habits of any class of English society springs from the improper prescription of alcohol by medical men. Unquestionably, habits of this kind are occasionally formed in this way, but by no means so often as the first paragraph of the declaration would seem to imply, and as it will undoubtedly be interpreted to mean by the public, who will look upon it as a distinct admission that the medical profession has had a relatively considerable share in the spread of intemperance.

In regard to the second paragraph, he says that it will convey to the public an entirely false impression as to the state of competent scientific opinion. It will be

taken as a confirmation of the now obsolete doctrine of Lallemand, that alcohol is treated by the organism as a merely foreign stimulant, and is not decomposed therein.

We believe that Dr. Anstie is right in the stand which he has taken, and, while fully admitting that alcohol is often prescribed recklessly, think that only a very few cases of intemperance can with any fairness be traced back to its administration by a physician in the treatment of disease: we think, therefore, that the publication of this paper will do harm by confirming a popular impression, which is doubtless fostered in many cases by the drunkard, who wishes to palliate his excesses.

THE EPIDEMIC OF SMALLPOX.

THE weekly reports of the Board of Health show that the epidemic of smallpox in this city is beginning to diminish in severity. It is to be hoped that the lessons taught by it will not be lost upon our people, and especially upon the Board of Health. Although we have no official report on this point, there can be but little doubt that, while the recently vaccinated have not in all cases escaped the disease, the number of these who have been attacked is small in comparison with that of those who are either wholly unprotected or who have not been vaccinated since infancy.

The precautions taken by the Board of Health against the spread of the disease do not seem to us to have been so efficient as they might have been. In the first place, we believe there were no general directions given in the daily newspapers as to the means to be taken to disinfect the sick-room, and also the wearing-apparel and the bedding of the sufferer. The arrangements for transporting the sick to the municipal hospital seem to have been especially defective, for not only were they often detained for a long time in the neighborhood of Independence Hall,—one of the most frequented parts of the city,—but the ambulances went about from house to house, in this way no doubt carrying the contagion into healthy localities. It is said, moreover, that the municipal hospital was overcrowded, which might have easily been prevented by the erection of pavilion hospitals of wood, as was done during the late war. We know that for much of this the Board of Health is not responsible, that its means of doing good are very much hampered by the want of money, and that our city government is rather inert, and is not so liberal as it might be in voting appropriations of money to be expended in maintaining the public health; but we think that no one can read the names of the gentlemen who compose the Board of Health without feeling that several of them possess no particular qualification for the position. We can see no reason why smallpox should be more contagious and virulent in this city than in New York. In the latter city the repressive measures taken last year were very successful, and there is every reason to believe that they will be so again this year. New York, with its tenement-houses and its poverty and misery existing to a degree unknown in this city, has

almost escaped the pestilence, while Philadelphia has suffered severely.

Although we admit that there is a difference of opinion in regard to the propriety of publishing the number of cases of smallpox reported, yet there can be no question that the withholding of these reports has very much tended to produce the exaggerated rumors which have been current in this and other cities as to the extent to which the disease has prevailed here, and which have been the cause of great pecuniary loss to our merchants.

OBITUARY.

PROFESSOR PAUL DUBOIS.—This celebrated obstetric teacher and practitioner, who recently died in Paris, was born in 1795. For many years past he had lived in a state of mental obscurity, although it is said his physical condition appeared to indicate anything but ill health. He was the son of an illustrious father, Antoine Dubois, Professor and Surgeon-in-Chief of the Maternité Hospital in Paris, and to his instruction and influence is due the early prominence of the former, his father having obtained for him, when quite a young man, the position of Adjunct Surgeon to that institution. At the time of his appointment, four thousand women were annually admitted into its lying-in wards. Young Dubois was first appointed Assistant-Professor, but in 1834 he became, after a warm contest, Professor of Obstetrics. This position gave him a new and ample field for the display of his abilities; his lectures became very popular, and for many years his eloquence attracted large numbers of medical men and students to the hospital. He had the opportunities which so many busy practitioners neglect, to collect the results of his observations and practice in a valuable work on the special subject to which he had devoted his life; but he was no exception to the rule, and his vast experience remains comparatively unrecorded.

DR. ARTHUR MCWHINNEY, for many years engaged in the practice of medicine in Philadelphia, died suddenly of apoplexy, January 26, in the 54th year of his age. He graduated at the Jefferson Medical College in 1851.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY, JANUARY 11, 1872.

THE PRESIDENT, DR. J. H. HUTCHINSON, in the chair.

DR. JOHN ASHHURST, JR., exhibited several specimens, as follows:

1. A *sequestrum* consisting of almost the entire diaphysis of the tibia in a case of necrosis occurring in a child. The dead part was surrounded by new bone, with several cloacæ, through the largest of which the sequestrum was readily withdrawn by the aid of an elevator and Fergusson's lion-jawed forceps.

2. The *thumb and metacarpal bone* removed from a patient about sixty years old, who had for many months suffered from syphilitic panaris in its worst form: a toe had been removed some time previously for a similar affection, and a considerable portion of the cranium had been lost by exfoliation.

3. The *great toe and a portion of its metatarsal bone* removed from an old man on account of intractable ulceration of the plantar surface which had involved the bones and joints of the part, and which presented much the appearance of the "perforating ulcer of the foot," as described by French surgeons. The patient said that some years ago he had received a gunshot wound of the toe, but had entirely recovered from that injury, the present disease having originated in

exposure of the foot to intense cold in filling ice-houses. A year ago an attempt was made to preserve the toe by cutting away the indurated margins of the ulcer and removing the carious bone at its base, but the disease recurred, and amputation was eventually required.

4. A *fatty tumor* the size of an orange, removed from between the scapulae of an old man: the disease had existed three years.

5. The *condyles of the femur, articulating surface of the tibia, and patella*, removed by excision of the knee-joint in a case of chronic disease of the articulation, occurring in a youth of eighteen. The disease had existed over a year, and the joint had been open about three months. There was great swelling and infiltration of the soft parts, with disorganization of the articular ligaments and consequent increased mobility: grating was readily elicited by rubbing the joint-surfaces together. Excision was done January 11, 1872, by means of a single transverse incision, as originally suggested by Park, and since practised by Texter, Kempe, and Fergusson, the bone-sections being made with a butcher's saw. The joint-surfaces were almost entirely deprived of cartilage, and were carious, the patella likewise being extensively diseased.

The wound was lightly dressed with oiled lint, and the limb placed upon a bracketed back splint, which it is intended not to change, if it can be avoided, for at least six weeks.*

Dr. J. M. BARTON presented a specimen of *mixed round- and spindle-celled sarcoma*, removed by Prof. S. D. GROSS from Mr. J., æt. 32, who was in good health until the latter part of 1868, when he discovered a small tumor in the calf of his right leg. This grew slowly, and was removed in July, 1869. It was a spongy mass, very vascular, and resembled an angioma, though its real structure probably approached that of the present growth.

In August, 1871, another tumor was removed from the same situation by Prof. GROSS. It was developed between the soleus and posterior tibial muscles, immediately beneath the cicatrix from the previous operation, but was different in appearance, being quite soft and vascular. It was probably a fibro-sarcoma.

To-day the third tumor was removed from the same situation: it is larger, more vascular, and much softer than the previous growths. It extended up into the popliteal space, and all the surrounding muscular structures were infiltrated by it.

The patient and his friends would not permit amputation.

The specimen was referred to the Committee on Morbid Growths, who reported:

"Your committee, having hardened portions of the tumor and prepared sections of it, are of the opinion that it is a sarcoma, presenting in some parts exclusively small spindle-shaped cells, in others small round cells with large nuclei."

Dr. COMEGYS PAUL exhibited an *angular fragment of bone removed from the œsophagus*, and read the following history:

"Mrs. H., æt. 57, is of very nervous temperament, and has been subject to attacks of hysteria for several years past.

"On the 19th of December last, while at dinner, she swallowed, with a spoonful of soup, a piece of bone, which lodged in the œsophagus and occasioned a great deal of distress. I was sent for in the early part of the evening of the same day. Upon examination I could distinctly feel, with an elastic bougie, the foreign body fixed at about the junction of the upper and middle third of the œsophagus. During that afternoon she had been making constant efforts to dislodge it, by coughing, by emetics, etc., and the part was exceedingly sensitive upon this account.

"She seemed to be entirely overcome by her anxiety, and while I was there she had two hysteric convulsions of a severe character. Because of her excited condition I considered it prudent to put her under the influence of an anodyne before making any attempts at removal of the obstacle. Towards midnight I returned, and introduced a ramoneur or horse-hair bougie, and succeeded in raising the bone about an inch and a half, when it slipped from the grasp of the instrument, and two succeeding attempts were without success. An

emetic was now given, with no better result, and, thinking that enough had been done that night, I again administered an opiate, and left her.

"The next morning the instrument was reintroduced, and this time I succeeded in removing the offending substance.

"It is a thin piece of the compact material forming the shaft of a long bone, and has the following measurements: length, $\frac{3}{4}$ inch; breadth, $\frac{2}{3}$ inch; thickness, 2 lines; long diagonal, 1 inch. The corners are very sharp, and caused slight laceration of the œsophageal tissues, as evinced by the expectoration of blood for a few minutes after the operation. However, within one week she was suffering from no inconvenience or painful deglutition."

BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES.

MONDAY, JANUARY 8, 1872.

DIRECTOR W. S. W. RUSCHENBERGER, M.D., in the chair.

Present also—Prof. Jos. Carson, Prof. R. E. Rogers, and Messrs. Tyson, F. W. Lewis, Nancrede, I. Norris, Schaeffer, McQuillen, Holt, Buckingham, Corlies, West, Packard, Wood, and Richardson.

Visitors—Commodore J. P. Gillis (M.A.N.S.), Dr. Tomey, U.S.N., Dr. L. A. Duhring.

Dr. JOS. G. RICHARDSON read a communication on "Certain Human Parasitic Fungi and their Relations to Disease," illustrated by specimens of the *Microsporon furfur* mounted in a saturated solution of acetate of potash. In this paper, after a description of *Tinea versicolor*, the author maintained the view that other tissues besides the skin might be the seat of parasitic growths, as indeed had been shown was the case in regard to the blood, in which, according to the observations and experiments of Beale, H. C. Wood, Jr., Davaine, Neffel, Semmer, and the writer, *Bacteria* may flourish; and on this fact Dr. Richardson founded a theory of the tonic effect of quinine and arsenic,—to wit, that these remedies acted by preventing or retarding the growth of *Bacteria* in the circulating fluid. (See p. 180 of current number.)

Dr. TYSON remarked that minute particles of germinal matter in the vegetable and animal kingdoms are often so entirely identical in their morphological characters that they cannot be distinguished from each other; so that the spores described by these various investigators as seen in the blood may have been the earliest forms of animal, and not of vegetable, organisms. He was himself inclined to doubt that the sporules Dr. Richardson found in his blood after drinking water filled with *Bacteria* were the same as those occurring in the fluid imbibed, for the reason already stated, and because the gastric juice has, as is well known, a powerful destructive action upon all bodies consisting of or containing albumen.

Dr. RICHARDSON observed that the existence and growth of *Sarcina ventriculi* in the stomach showed that the gastric fluid was not necessarily destructive to vegetable life, and mentioned that the strongest argument that *Bacteria* such as he drank are non-albuminous, vegetable, and *not animal* in their nature, is found in the fact that they are unacted upon by a solution of caustic potash.

Dr. TYSON answered that the *Sarcina* developed during the occurrence of pathological conditions of the stomach which there was no reason to suppose existed in Dr. R.'s own case when he made the experiment referred to.

Dr. RICHARDSON replied that he believed it was stated by Dr. Beale that the flocculi containing *Sarcina* in vomited matter were always intensely acid, and, although he knew of no analysis of the fluid, it was fair to presume that at least part of this acidity was due to the gastric juice.

Prof. CARSON remarked that, if we accept this theory of the tonic action of quinine and arsenic, iron, gentian, and the whole catalogue of roborants must receive the same explanation of their effects. From his own experience, he had been led to believe that arsenic produced a desire for food by its irritant action upon the coats of the stomach; and also that

* Jan. 25.—The excision wound united by adhesion through almost its entire length, and union of the resected bone-surfaces is evidently progressing. The patient's general condition since the operation has been perfectly satisfactory.

its tonic and anti-spasmodic power had been very much over-rated, especially as its effect upon the Styrian peasants was after a time to produce a dropsical condition of the whole body. He would like to inquire whether a fungus would not grow in solutions of quinia and of arsenic.

Dr. RICHARDSON replied that such was the case with certain kinds of fungi, but that others, and especially the *Bacteria* or *Microzymes* in question, had been shown to be killed by even very dilute solutions of these two agents.

Prof. CARSON further remarked that quinine had a powerful influence upon the nervous system, and that its effect upon the organism in general was certainly made up of several different elements. Recurring to Dr. R.'s experiment with *Bacteria*, it was difficult, he thought, to account for the entrance of these bodies into the capillaries, whose walls only after much dilatation would give exit to the Leucocytes of the blood, as is seen in Cohnheim's experiment.

Dr. H. C. WOOD, JR., observed that during the past few years he had enjoyed opportunities of observing intermittent fever very extensively in the Philadelphia and Episcopal Hospitals, and had experimented upon a great number of cases with the sulphites and with carbolic acid. The conclusions at which he had arrived were, that the latter of these so-called remedies had no more effect in checking the disease than so much cold water, and that the former were almost but not quite equally inert. He had, however, found arsenic to relieve very obstinate cases of ague with great certainty.

Dr. TYSON said that in some experiments of his own, conducted with this special object in view, he had found that the spores and threads of a fungus developed in a saturated solution of sulphite of soda were uninjured when macerated in the fluid after the liberation of sulphurous acid from the sulphite by the addition of an acid.

Prof. ROGERS remarked that this subject had an important bearing from a chemical point of view, on account of its close association with some of the phenomena of fermentation. It has long been known that the addition of sulphites or hyposulphites will obviate the loss of sugar by fermentation during the clarifying process, and also that the same compounds of sulphurous acid will prevent the conversion of barrelled cider into vinegar. The explanation is that the sulphites are converted into sulphates by the absorption of free oxygen, which absorption prevents the development of the vegetable organisms on whose growth fermentation depends, since oxygen is absolutely necessary to the germination of such fungous spores.

Prof. CARSON observed that some forty years since he was acquainted with a bottler who was accustomed to preserve cider by covering it with a layer of sweet oil, this doubtless having the same effect of cutting off a supply of oxygen.

Dr. RICHARDSON suggested, in regard to the tonic effect of iron in its various preparations, that it might be accounted for on the supposition that it acted by supplying a necessary ingredient to the red blood-corpuscles, and so increasing their number, when deficient, as in anemia.

Prof. CARSON approved of this explanation, and added that there was also another way in which ferruginous medicines acted powerfully in improving the tone of the system, and that was as restoratives of the blood-making function, and nutritive alterants. He had known many cases of ague where quinine failed to accomplish a cure, until after the patient had been subjected to the depurative action of tincture of chloride of iron with sweet spirit of nitre, through the kidneys.

REVIEWS AND BOOK NOTICES.

ON THE USE OF THE OPHTHALMOSCOPE IN THE DISEASES OF THE NERVOUS SYSTEM AND OF THE KIDNEYS; ALSO IN CERTAIN OTHER GENERAL DISORDERS. By THOMAS CLIFFORD ALLBUTT, M.A., M.D., etc. 8vo, pp. 405. London and New York, Macmillan & Co.

Soon after the introduction of the ophthalmoscope, hopes were expressed by various observers that it would give valuable assistance in the study of diseases of the nervous system; but to Von Gräfe is due the credit of demonstrating its usefulness

in a classical paper published in 1860, in which he describes the use of the mirror in the diagnosis of encephalic tumor.

So successfully has this field of research been cultivated, that we are now afforded a valuable monograph of four hundred pages, containing the results of many skilful laborers, to which have been added those of the author, who discusses these questions not as an ophthalmic surgeon, but as a physician more particularly interested in the study of diseases of the nervous system.

After a practical description of the fundus of the eye in its normal state, and of the means that may most easily be employed in its examination, he gives a clear account of the relations between the retina, optic nerve, and brain, and of the variations from health that may be observed by the mirror in various intracranial disorders and diseases of the spine.

Then follows an account of the changes in the retina in albuminuria, leukæmia, and syphilis; and of the amaurosis dependent upon diabetes, upon the abuse of tobacco or alcohol, and upon lead-poisoning.

He then gives an interesting account of the state of the intra-ocular circulation in sleep, and in the stupor that follows an epileptic attack or the inhalation of chloroform; and describes the influence upon it of various agents, such as bromide of potassium, ergot, chloral, etc.

After discussing the symptoms and results of embolism of the central artery of the retina, he gives the clinical reports of one hundred and twenty-three cases of nervous diseases, and concludes with a series of valuable tables, in which the condition of the eye-ground is recorded in cases of insanity with epilepsy, mania, dementia, melancholia, and general paralysis.

After a careful perusal of his facts, the reader may without cavil accept his statement in his introduction, that the ophthalmoscope is already of so much use in diagnosis that it should be in the hands of every physician who wishes to speak with authority upon the subject of diseases of the nervous system; and a brief allusion to the anatomical relations of the optic papilla and nerve furnishes the reasons for his faith in the mirror.

Upon looking into the eye, the optic papilla is the most prominent object, and is recognized as a disk of pink hue, from which arise the arteries and veins of the retina. The central artery, it will be remembered, is a branch of the ophthalmic, and it penetrates the optic nerve a short distance behind the globe, and, passing with the nerve-fibres onward, makes its exit from the centre of the disk. The central vein upon leaving the disk accompanies the artery in the optic nerve, leaves it a short distance behind the sclerotic, and joins the ophthalmic vein, which passes through the sphenoidal fissure and terminates in the cavernous sinus.

It was formerly supposed that the rosy hue of the disk was caused by minute vessels which arose from the central arteries and veins; but it has been shown by Galezowski that the retina and the disk have independent sources of blood-supply, and that the circulation in the disk forms a part of the vascularity of the brain.

This important point has been established by other observers, and has been confirmed by dissections after injections by Dr. Allbutt. Vessels arising from arteries at the base of the brain can be traced into the optic tracts, where they form an uninterrupted network, which extends from the tracts to the disks, where it produces their characteristic rosy hue.

Whilst the disk, then, may not be regarded as a dial-plate which furnishes exact information as to the encephalic circulation, yet most valuable evidence of changes and variations in pressure within the cranium may be obtained by an examination of it during sleep, or whilst the system is under the influence of certain remedies or general disorders.

An accomplished observer, Dr. Hughlings Jackson, says, "It is scarcely necessary for me to say that my reason for examining the eye during sleep was to form some idea as to the condition of the brain itself in this physiological condition; the retina and the brain being supplied by branches of the same trunk, the carotid, and these by the same vaso-motor nerves. We may therefore consider the retina as part of the brain extruded through an opening in the skull."

From these anatomical facts arise two marked pathological conditions of the optic disk. First, the swollen oedematous

state, which our author styles "ischæmia, or choked disk," well shown in the colored lithograph which forms the frontispiece of his book, characterized by dilated veins, an enlargement of the disk, and its projection forward into the vitreous humor. This condition, which may exist without any disturbance of vision, is considered a result of pressure upon the sinuses of the brain, and through them upon the retinal veins, aided by what has been happily called by Von Græfe the "multiplying action" of the sclerotic ring. This pressure may be due to any aneurism, cyst, exostosis, collection under the dura mater, or morbid growth, whether malignant or benign, or, in short, to anything which may increase the intracranial tension. Second, the condition known as optic neuritis, marked by slight œdema of the disk, decided hyperæmia in its early stage, and positive atrophy in its latter, accompanied by serious if not entire loss of vision. It is believed to indicate encephalic changes of an inflammatory character, such as meningitis or encephalitis, and is distinguished by tissue-changes throughout the entire course of the optic nerve; whereas the disturbances in ischæmia are limited to the disk alone.

Whilst this marked distinction based on the difference of vascular supply may be accepted, yet atrophy may follow ischæmia, and it may in the late stage of the lesion be difficult to decide whether the primary disturbance was due to a mechanical pressure, or to proliferation in the nerve-tract.

Having shown that Dr. Allbutt has sure foundations for his deductions, it remains only to say that he has displayed marked ability in his own observations, and great candor in stating the opinions of all who have contributed to this subject.

One great cause of disappointment in the use of the ophthalmoscope has been its use only by the "indirect" method, by which an "inverted image" of the fundus is obtained, on so small a scale as to render slight changes entirely unrecognizable. A few efforts by the "direct method" will convince any observer of its great advantages, since it is much more simple; and, the scale of enlargement being four or five times greater than that of the "inverted," the least deviations from a normal state are readily appreciated.

THE SCIENCE AND PRACTICE OF SURGERY. Illustrated by Four Hundred and Seventy Wood-Engravings. By FREDERICK JAMES GANT, F.R.C.S., Surgeon to the Royal Free Hospital, formerly Surgeon to Her Majesty's Military Hospitals, Crimea and Scutari. 8vo, pp. xlv., 1265. Philadelphia, Lindsay & Blakiston, 1871.

This is a book of stupendous size and high-soaring aims, and the reader of it may well feel as if he was starting on a long and doubtful journey.

In a somewhat elaborate preface and introduction a very large amount of work is mapped out, and a portentous number of divisions and subdivisions are given, while the student is treated to an array of knowledge and quasi-philosophic reasonings which in our younger days we should have regarded as appalling. But let him, undismayed, wade boldly through this shallow slough of despond, and he will at last come out upon hard ground, where he may have some idea of his surroundings.

The views of Mr. Gant upon inflammation, though occupying sixty pages, are very far indeed behind the times,—which we cease to wonder at when we see that he does not appear to have read anything on the subject bearing a later date than 1864, and but a solitary reference is so recent. To judge from this book, it would be inferred that Germany had done nothing to advance our knowledge of pathology since the publication of the English translation of Virchow; so that, as the first reason given for imposing so huge a volume upon the profession is that it is now many years since a new systematic work representing the science and practice of surgery has appeared in England, we feel that Mr. Gant has indeed furnished us with a new book, but has kept back much new material which has been fully established by the progress of science.

Some space is devoted to the consideration of tumors, Paget's earlier editions having been ransacked for materials, and short abstracts of his views are presented, while more than an entire page is devoted to a display of almost antiquarian learning in describing and tracing to their authors

the names of the varieties of cancer which had their origin in the first half of this century.

The account given of the claims made for syphilization as a remedial measure is succinct and to the point, and the conclusions arrived at in England as to its merits by Messrs. Lane and Gascoyen are placed briefly but clearly before the reader; but we are tempted to laugh at page 196, where Mr. Gant recommends the inhalation of the vapor of calomel for the treatment of syphilitic angina, and tells us that of the two cases in which he has tried it, one died from pneumonia, but in the other no serious inconvenience was experienced; and the reader might be led to suppose that the Surgeon to the Royal Free Hospital lends the weight of his authority to a method of treatment upon scanty grounds and very limited observation. The chapter upon gunshot wounds is fair, while those upon aneurism and the ligation of arteries are compactly put together, the materials well arranged, and reference is made to most of what is known upon the subjects of which they treat. In the chapters upon fractures and dislocations, American authorities have been largely drawn upon, and the general subject is well treated, though the special directions are necessarily very short.

As we should expect from Mr. Gant's late contributions to surgical literature, the chapter upon excisions is quite full, seventy-six pages being devoted to the consideration of this important surgical procedure. Of twenty-eight excisions done by himself, twenty-five of which were of the hip, knee, or elbow, in only one did death occur, and in this solitary instance tetanus was the immediate cause of the fatal termination. Mr. Gant is fortunate in never having seen pyæmia follow an operation of resection; so that we hardly wonder when our author thinks the results are largely dependent upon the operator, for we know of no one else who has reported such uniform success. Full analyses of his own cases, and of some large series collected by himself and others, are appended to the description of each operation, and are of real value, but want of space will not permit us to reproduce them here.

The chapter upon hernia is remarkable for some very excellent illustrations of Wood's method of operating for the radical cure of rupture, which show clearly the successive steps advised by that eminent surgeon in his ingenious attempt at alleviating this infirmity, to which so large a proportion of flesh is heir. Mr. Gant gives a good account of the operation of ovariectomy, and dwells upon the practical points which have been demonstrated by Mr. Wells' extended series of cases. There is also added to the volume an account of the method in which examinations are conducted at the Royal College of Surgeons, which we suppose will possess much interest for the students who have to pass those ordeals, and is suggestive to all those in this country whose duty it is to examine for degrees.

Our opinion of Mr. Gant's book, taken as a whole, can be expressed in very few words. In the statement of theories and principles it is diffuse and indistinct, but its practical directions are clearly stated, and show its author to be a man of quite extended experience. The style is at times stilted, and we have noted many inaccuracies, of which it is not worth while to attempt the detail in so short a notice as this must necessarily be.

The book is well printed, on good paper, and is profusely illustrated, but we are inclined to protest against the boundless expansiveness of which octavos seem capable, and of which the volume before us affords a pertinent example. For most readers, so thick a book is quite as unwieldy as any quarto; and we feel a regret that such very portly volumes should take the place of the handsome large-paged editions which were formerly in vogue.

STIMULANTS AND NARCOTICS: MEDICALLY, PHILOSOPHICALLY, AND MORALLY CONSIDERED. By GEO. M. BEARD, M.D. 12mo, pp. 155. New York, Putnam & Sons, 1871.

EATING AND DRINKING. A Popular Manual of Food and Diet in Health and Disease. By GEO. M. BEARD, M.D. 12mo, pp. 180. New York, Putnam & Sons, 1871.

These two works are intended to familiarize the people at large with the history and effects of alimentary substances; and it is to be regretted that the author has often sacrificed

scientific accuracy of statement in order to bring his remarks within the limits of popular comprehension. In the first volume his definition of fermentation is equally if not more applicable to putrefaction, as "a kind of decomposition that vegetable substances undergo when placed in contact with air and moisture." But in general the work has been remarkably well done, and the error of adopting a partisan view of eating and drinking studiously avoided. The peculiar dryness of our climate in relation to intemperance, the incompatibility between schools and grog-shops, and the inability of legal enactments to suppress drunkenness are each in turn discussed, and the conclusion arrived at is, that the "future of temperance must inevitably share in the future of civilization." In the second work alluded to, a brief description of food in various countries is followed by a dissertation upon dietetics, in which the absurdities of vegetarianism are rebuked, and a very remarkable treatise on dyspepsia ends this interesting production, which contains more solid information than any other work of its size upon the same subject. Now, we are not surprised to find that Americans as a race are sadly intemperate, when the enormous amount of mental work which they perform is considered; nor is dyspepsia an unnatural result of the weary brains and ill-used stomachs of a large class in our community. But that any education, except in so far as it teaches men how to use instead of abusing their constitutions, would suffice to remove the evils of intemperance, is a proposition which seems extremely erroneous. Perhaps by substituting moral and mental pleasures for mere physical gratification the desired result might be obtained; but the latter element shows itself quite as strongly in the savant as in the swineherd, and cannot be ignored.

There is an assertion contained in the latter part of "Stimulants and Narcotics" concerning the use of tea, which we are able to deny from personal experience. The author says, "In China and Russia tea is made very weak, not by long steeping, but by pouring boiling water on the leaves." On the contrary, this last method renders the drink much stronger, as any may find out for themselves, however it may be explained.

The impression given by the chapter on dyspepsia is that Dr. Beard has mistaken the stomach for the gizzard, since he ignores the gastric juice altogether, and throws the burden of the digestive process upon the gastric muscles ("Eating and Drinking," p. 172). But, with these few exceptions, the volumes are well written, and deserve a liberal patronage at the hands of the public.

A typographical error in Book 1st, p. v., makes Dr. John Harley the author of *The Old Vegetable Narcotics*.

A CONTRIBUTION TO THE TREATMENT OF VERSIONS AND FLEXIONS OF THE UNIMPREGNATED UTERUS. By EPH. CUTTER, A.M., M.D. Pamphlet, 8vo, pp. 44. Boston, James Campbell & Co., 1871.

Another effort towards a more successful treatment of uterine displacements. Dr. Cutter brings forward two pessaries, one of which he describes as "purely his own." Both act as bent levers, the anterior edge of the perineum being the fulcrum, the cervix the point to be held or moved, while to the short external arm force is applied by a band of india-rubber tubing, passing backwards between the nates and upwards to a waist-band. In their adjustment we are introduced to a new family of uterine instruments,—loop- and T-pessaries, vaginometer, vaginal sounds, perineal elastic bands, defecating attachment and joint—we become bewildered at the fertility of mechanical ingenuity. Amid the maze, some, doubtless simple, points still perplex us. In regard to the short arm, we read, p. 13, "The perineal hook should surround the perineum without touching it,"—seemingly a difficult task for the hook; and how, we ask, are we to discover "if air does not circulate between it and the perineum"?

Again, both elastic tube and hook are directly in the way of defecation. P. 13, "Patients should be instructed to loosen the belt about two inches before defecation, then turn the hook forwards and hold." Fancy the agony of one seized with imperative intestinal premonitions, striving in vain at the last moment to remember the lucid directions, "loosen the belt about two inches before defecation," etc.! Why about two inches before defecation, when another instrument might be so readily devised to measure it more accurately?

On p. 15 we are told that should subsequent discomfort arise there must be something wrong, either with patient or pessary; and we learn that iodoform suppositories are useful in allaying vaginal irritation before or after using this pessary, which doubtless possesses some subtle influence over that refractory drug which other pessaries do not.

How truly and graphically could a grateful patient describe herself, after being relieved, as right to a T!

On page 31 the author shows how he often persuades unwilling patients to be bled: he tells them, "Water is indispensable to human life. If people fall into the water, and life is destroyed, is this an argument against its use as a beverage?" This is unanswerable, and almost equal in clearness and simplicity to his "homely illustration" a few pages before: "Suppose you have a uterus in your coat-sleeve." Excuse us; we had rather not.

We get on page 41 a chance insight into the personal habits of the author. What a simple, honest taste is expressed in the words, "I say *lard*, because I like it better than anything else"! Better even than obstetric surgery, doctor?

We are advised that vaginal examinations be made upon a "dining-table." Why, we ask, on a dining-table? True, he explains somewhat later, "because they [the patients] do not sink in." Does anybody suppose they do? We should fancy, however, that after submitting to his mechanical measurements and appliances they might be desirous of doing so, if they could.

BOOKS AND PAMPHLETS RECEIVED.

Transactions of the Wisconsin State Medical Society, 1871.

Eleventh Annual Report of the Alabama Insane Hospital, October, 1871.

Diagrams of the Nerves of the Human Body; exhibiting their Origin, Divisions, and Connections, with their Distributions to the Various Regions of the Cutaneous Surface, and to all the Muscles. By William Henry Flower, F.R.C.S., Assistant-Surgeon to, and Demonstrator of Anatomy at, the Middlesex Hospital. Edited, with Additions, by William W. Keen, M.D., Lecturer on Anatomy and Operative Surgery in the Philadelphia School of Anatomy, etc. Folio, pp. 12. Philadelphia, Turner Hamilton, 1872.

Electricity in its Relations to Practical Medicine. By Dr. Moritz Meyer, Royal Counsellor of Health, etc. Second Revised and Corrected American Edition. Translated from the Third German Edition, with Notes and Additions, by William A. Hammond, M.D., Professor of Diseases of the Mind and Nervous System, and of Clinical Medicine, in the Bellevue Hospital Medical College. 8vo, pp. xiv., 502. New York, D. Appleton & Co., 1872.

The Detection of Criminal Abortion, and a Study of Foeticidal Drugs. By Ely Van de Warker, M.D. Pamphlet. Boston, James Campbell, 1872.

First Special Report of the Chicago Relief and Aid Society. Pamphlet.

Electricity in the Treatment of Diseases of the Skin. By George M. Beard, M.D. Reprinted from the *American Journal of Syphilography and Dermatology*.

ABSTRACTS.

CAUSE OF DIABETES.

A MOST interesting and important addition to our knowledge of the cause of diabetes (*The British Medical Journal*, December 23, 1871) has been recently made by Professor Cyon, in a paper which he, along with M. Aladoff, has communicated to the Imperial Academy of Sciences at St. Petersburg, and which is published in the *Mélanges Biologiques*. Several years ago, Claude Bernard put forth the theory that in diabetes the functional activity of the liver is increased, and a larger amount of sugar formed in it in consequence of the vessels of the organ becoming dilated, and

the circulation in them more active. The increased activity of the circulation he attributed to some change in the vaso-motor system of the hepatic vessels, which allowed their walls to relax in a similar way to those of the ear of the rabbit after the sympathetic has been divided in the neck. He ascertained that the formation of sugar could be greatly increased, and diabetes produced, by galvanizing the pneumogastric nerves in the neck, or by irritating their roots by puncturing them at their origin in the fourth ventricle. At the same time that the production of the sugar was increased by the puncture, the vessels of the liver became much dilated. It might thus have been supposed that the nervous influence which originated in the medulla oblongata and caused diabetes, passed down to the liver through the vagi. This, however, was not the case; for when these nerves were cut and their ends galvanized, diabetes was only produced by irritation of the central end, but not by irritation of the peripheral extremity. Diabetes could also be induced by puncturing the fourth ventricle, just as readily after the vagi were cut as when they were intact. If the splanchnic nerves were cut before the fourth ventricle was punctured, no diabetes was produced; but if they were cut after the puncture had been made, their section did not remove the diabetes which was present.

From these and other experiments, Bernard concluded that the air inhaled during respiration irritated the ends of the vagus in the lung; that this irritation was conducted up to the medulla oblongata, and was thence reflected down the splanchnic nerves to the liver, and caused the formation of sugar. By what way the nervous influence passed from the medulla to the splanchnics, however, was not ascertained; and no very satisfactory explanation could be given of the fact that section of the splanchnics after puncture of the ventricle did not remove the diabetes. Some light was thrown upon this question by the observations of Eckhardt and Pavy, but it has been reserved for Cyon completely to solve it.

Pavy noticed that section of the superior cervical ganglion of the sympathetic might cause diabetes; and Eckhardt found that it followed section of the last cervical or any thoracic ganglion, just as certainly as puncture of the fourth ventricle. Section of the splanchnic nerves did not produce it.

Eckhardt tries to explain this difference between the effect of dividing the ganglia and the nerves by supposing that diabetes is due to irritation of the ganglia by the exposure of their cut surfaces to the air, and that, when the nerves are divided between the ganglia, paralysis and not irritation is produced. If this hypothesis were true, diabetes should not occur when the ganglia are completely extirpated; but Eckhardt does not say whether it does or not, and therefore Cyon determined to perform this operation, and thus test the truth of Eckhardt's theory. When he cut through the last cervical or the first dorsal ganglion, he found, like Eckhardt, that diabetes was produced; but it occurred just as certainly when both ganglia, or even the last cervical alone, were cut completely away, or when the nerve-fibres entering this ganglion were all cut through, although the ganglion itself was never touched. This clearly showed that Eckhardt was wrong, and that the diabetes occurring after operations on the last cervical or first thoracic ganglia was due to paralysis of the nerves which were connected with them, and not to irritation of the ganglia themselves. He next ascertained that all the fibres entering these ganglia had not the same effect in causing diabetes, for it occurred when either the branches which pass along the vertebral artery from the spinal cord to the last cervical ganglion, or the two fibres which connect it with the first thoracic ganglion, were divided, whereas section of the other nerves proceeding from the ganglion did not do so. It thus became evident that the nerve-fibres whose paralysis causes diabetes, come from the spinal cord through the vertebral nerves to the last cervical ganglion, and pass from it to the first dorsal in the two connecting branches which, in their course from one ganglion to another, enclose the subclavian artery, and form the annulus of Vieussens. So much having been ascertained, it would seem easy enough to trace the nervous path down the gangliated cord and splanchnics to the liver; and one would expect that, by dividing the cord in the thorax, and thus paralyzing the fibres going to the liver, diabetes would be produced as certainly as when they were divided at the level of the vertebral artery.

Such, however, was not the case; for not only did subcutaneous division of the gangliated cord between the tenth and twelfth ribs not produce diabetes, but, if the cord were cut before or at the same time as the last cervical or first thoracic ganglion, the diabetes which would otherwise have occurred did not appear. But when diabetes was first produced, division of the cord did not diminish it, or even hinder its increase, just as Bernard had found with regard to the splanchnics. In order to explain this apparently contradictory result, Cyon set about investigating the way in which the fibres of the annulus of Vieussens affect the liver, and more especially the circulation in it.

On irritating these fibres, he found that a number of fine white lines appeared round the lobules of the liver, in the position occupied by the small branches of the portal vein and hepatic artery; and these were so numerous as to produce the appearance of whitish spots on the organ, which continued while the irritation lasted, and disappeared after it ceased. At the same time that these spots appeared, he noticed that any cut or tear in the liver bled less freely than before. This indicated that contraction of the portal vein or hepatic artery, or of both, had been occasioned by irritation of the annulus; but, in order to make assurance doubly sure, as well as to find out whether it was the artery or the vein that contracted, he put a T-canula into the hepatic artery and connected it with a manometer. On then irritating the annulus of Vieussens, the pressure rose in the manometer as much as thirty to seventy *millimètres* of mercury; while in the carotid it only rose five to ten *millimètres*. To remove the last objection which might be raised, and show conclusively that the rise of pressure was due to contraction of the branches of the hepatic artery in the liver, and not to any other cause, he compressed the artery beyond the point where the canula had been inserted, so that no change in the calibre of its branches could have any influence on the blood-pressure in its trunk. On again irritating the annulus, he found that no alteration in the pressure was produced. Division of both annuli produced, as was to be expected, dilatation of the branches of the hepatic artery, and fall of the blood-pressure in it. When the portal vein was experimented on in the same manner, the pressure only rose ten or twelve *millimètres* during irritation; and he thinks this is probably due indirectly to the change in pressure in the artery.

These experiments completely prove that the vaso-motor nerves of the hepatic artery are contained in the annulus of Vieussens; that their division causes the vessel to dilate, and at the same time produces diabetes. The theory of Bernard, that the diabetes depends on the dilatation, and on the consequent rapid circulation of blood in the liver, is thus rendered in the highest degree probable. But why should section of the splanchnics or of the gangliated cord prevent the production of diabetes, but not remove it when present? This Cyon also explains. These parts of the nervous system contain the vaso-motor fibres for the vessels of the intestines; and, when they are cut, the vessels dilate, and blood accumulates in them to such an enormous extent that there is either too little blood remaining, or it is under too low a pressure for the circulation in the liver to become increased above its normal, even although its vessels be dilated. When the hepatic vessels, however, are dilated first, the blood continues to pass through them, and diabetes continues, even although the intestinal vessels have become relaxed.

The researches of Cyon, along with those of Bernard, render our knowledge of the part which the nervous system plays in influencing the production of sugar in the liver, and in causing diabetes, in so far as this disease depends on increased formation and not on diminished combustion, tolerably clear, though still incomplete; and enables us to form some kind of idea of the manner in which opium and allied remedies prove beneficial. The irritation which the inspired air produces on the ends of the vagi in the lungs is conveyed up these nerves to the medulla oblongata, and there exerts an inhibitory action on the vaso-motor nerves of the liver. When the irritation is increased, as by galvanizing the vagi, the inhibitory action is so great as to produce complete paralysis of the vaso-motor nerves, and induce diabetes; and, on the other hand, when the vagi are cut, the vaso-motor nerves act more powerfully, causing the vessels of the liver to contract, and the production

of sugar to diminish, as Bernard found that it did. It seems, therefore, not improbable that the beneficial action of opium and its alkaloids is due to their lessening the excitability of the vagus. We can hardly suppose, however, that diabetes is not sometimes due, either in whole or in part, to diminished combustion; and the causes of this still remain a matter for future investigation.

GLEANINGS FROM OUR EXCHANGES.

POPLITEAL ANEURISM CURED BY FLEXION IN THREE DAYS.—The *Bulletin de l'Académie Royale de Médecine de Belgique* (*British Medical Journal*, December 23) contains an account by Dr. Larondelle of the cure of a popliteal aneurism of the size of an orange. Dr. Larondelle adopted Mr. Ernest Hart's method of forced flexion of the leg upon the thigh. There was œdema of the foot and leg. The bandage employed was applied after the fashion recommended by Mr. Hart in his first paper in the *Medico-Chirurgical Transactions*; and the patient, as in his second published case, was allowed to walk about the room with the help of a crutch. The bandage was solidified by starch. The flexion seems to have been forced a little in excess. At the end of the second day, as the patient was complaining much of the pain, the bandage was removed. A second bandage was applied, and on the third day the tumor was found to be solidified. The cure thus effected was permanent; and the tumor, at the end of five months, was reduced to the dimensions of a small, hard kernel.

FORCE AND ENERGY.—In some "Contributions on the Physiology and Therapeutics of Food," in the *London Lancet* for December 2, 1871, Dr. F. W. Pavy lays down the distinction between *energy* and *force*, as follows: "By 'force' in rigid signification is understood the power of producing 'energy,' by 'energy,' the power of performing work. To give an illustration: powder has force, the cannon-ball energy; but to speak of the force of the cannon-ball is inexact. I may also remark that the words 'actual' and 'potential' are in frequent use to qualify the state in which energy is met with. By actual energy is meant energy in an active state, energy which is doing work. By potential energy, energy at rest,—energy capable of doing work, but not doing it. In a bent cross-bow there is potential energy,—energy in a state of rest, but ready to become actual, or to manifest itself, when the trigger is pulled. Again, actual energy is evolved from the sun. By vegetable life this is made potential in the organic compounds formed. In these organic compounds the energy is stored up in a latent condition; potential energy is reconverted into actual energy when they undergo oxidation during combustion, or in their utilization in the animal economy."

FREQUENCY OF ULCERATIONS OF THE LARYNX IN SYPHILIS.—Jules Sommerbrodt (*L'Union Médicale*, December 2, 1871; from *Wiener Mediz. Presse*) has collected the following statistics in regard to the frequency of ulceration of the larynx in syphilis. Kühle has found ulceration of the larynx 15 times in 100 autopsies of syphilitic subjects, while Altenhofer has only met with it 25 times in 1200 patients. Gerhardt and Roth have observed it 18 times in 56 syphilitics, to wit: 11 times in 44 patients with secondary symptoms, and 7 times in 12 patients with tertiary symptoms. Lewin has found it in 44 patients out of 1000, and Engelsted in 25 out of 521. Out of 84 syphilitic patients observed by Sommerbrodt at the Allerheiligen Hospital, 15 presented ulcerations of the larynx in different stages, and 14 suffered from a catarrhal affection with hypertrophy of the mucous membrane. Moreover, in 238 patients affected with various diseases of the larynx, syphilis proved to be the predisposing condition in 45. This manifestation of the diathesis occurs at different periods after the infections. Turck observed it in a patient thirty years after the contraction of a chancre, and Frankl found it in an infant only two months old, in whom the first symptoms appeared a month after birth. Turck has observed it six months after infection; and Lewin, two or three months after the occurrence of the primary symptoms. The vocal cords are

the parts most frequently affected. The left vocal cord is more often affected than the right, which, on the contrary, is the more usual seat of tubercular ulcerations.

GUNSHOT WOUND OF BOTH LUNGS AND OF THE RIGHT AURICLE OF THE HEART.—Dr. J. B. Roberts reports in *The Richmond and Louisville Medical Journal* for December the following post-mortem appearances in a man who had run sixty yards and lived an hour after the reception of a gunshot wound. The ball entered the right cavity of the chest between the sixth and seventh ribs, fifteen inches downward and backward from the sterno-clavicular articulation, twelve inches from the median line in front. The ball passed through the middle of the right lung, through the anterior wall of the right auricle of the heart, cutting its way through the anterior part of the upper lobe of the left lung, and emerged from the body between the fourth and fifth ribs, about two inches below the left nipple.

NUCLEATED BLOOD-CELLS IN LEUKÆMIA OF INFANTS.—Dr. Neumann (*New York Medical Journal*, November, 1871; from *Archiv der Heilk.*, 71, xii., 1871) has assured himself of the presence of nucleated blood-cells during life, by puncturing with a needle for a drop of blood. Besides numerous colorless granular cells of 0.005–0.012 mm. in diameter, which under circumstances of health present no nuclei, there were found single homogeneous pale yellow cells of 0.006–0.008 mm. in diameter, with a colorless or spindle-shaped nucleus, or with numerous granules (remains of nuclei). By the addition of acetic acid these latter cells lost their color, and within their contour, which appeared as a fine circular line, the somewhat yellowish-tinged nuclei and granules stood out with a sort of fatty glitter. Dr. Neumann is inclined to regard the presence of these transition-forms between colorless and colored blood-cells, which are produced by the diseased marrow of the bones, as a diagnostic sign of disease of the marrow in leukæmia, since in a normal state they are found only in the marrow, and there is no evidence that in leukæmia they occur also in other organs, provided they are not carried into the same. In proof of this, he asserts that he has found nucleated cells in the general circulation of new-born infants at term, and not alone (as has already been made known) in the pancreas, spleen, liver, and bony marrow. How long they remain after birth is not certain; they were absent in a child which died of peritonitis sixteen days after birth.

TRICOPTILOSE.—Under this name M. Devergie reports (*Annales de Dermatologie et de Syphiligraphie*, 3^{me} année, No. 1) two cases of a disease of the hair which he believes has hitherto been undescribed. The scalp itself is unaffected, but the hair becomes dry and loses its glossiness, each hair presenting at several points fusiform enlargements. At the level of these enlargements two or three small filaments separate from the hair, their free extremities being directed sometimes upwards and sometimes downwards. As a consequence of this separation of the hair into filaments, it at length breaks. As the different hairs break off at different heights, and are divided into a number of interlaced filaments, the hair appears to be not only *crêpé* but tangled. No parasitic growth could be discovered either by M. Devergie or by M. Gubler. The only treatment which seemed to be of any use was the removal of the diseased hairs by the scissors and the employment of an ointment composed of turpeth mineral, butter of cocoa, and oil of sweet almonds. The name tricoptilose is given to the disease in consequence of the resemblance of the hairs affected by it to a feather.

THE INFLUENCE OF ALCOHOL ON THE TEMPERATURE OF THE BODY.—Cuny Bouvier (*Centralblatt*, No. 51), after calling attention to the fact that destruction of the spinal cord in animals at the level of the sixth or seventh vertebra produces an elevation of temperature, which persists and may even be increased after death, says that this post-mortem elevation of the temperature may be prevented by the administration of alcohol. The use of alcohol enables animals in which pyæmic symptoms have been induced to resist the fever much longer than when it has not been employed, and it will be remembered that in animals narcotized by alcohol no fever is excited by the subcutaneous injection of putrid matter.

ANEURISM OF BASILAR ARTERY.—Dr. Loomis exhibited at a meeting of the New York Pathological Society (*The Medical Record*, January 2) a specimen taken from an unmarried German, 29 years of age, who was admitted into Bellevue Hospital on the 1st of last September. He was perfectly well for three or four years, until about two months before he sought relief, when he noticed a sensation of numbness on the left side of the face, and a loss of hearing in his left ear. He also noticed that the saliva dribbled from the left corner of his mouth, and that he was unable to swallow food from the left side of his mouth, and was compelled to push it in on the other side with his finger. At the time of admission his general condition was very good, but, aside from the symptoms already noticed, there was a loss of the sense of taste on the left side. Physical examination gave negative results. There was no paralysis of any parts of his body save those mentioned. On the 16th of September he was seized with vomiting, after which he partially lost his power of walking, and within a few days after he lost his power of speech and died. The day previous to death, bronchial râles appeared on auscultation.

At the autopsy all the thoracic organs were found healthy except the lower lobe of the right lung, which was congested. The liver was slightly cirrhotic, and contained a deep fibrous cicatrix, which was evidently of syphilitic origin. No other evidences of syphilis were apparent, either before or after death.

On opening the cranium, all the membranes were intensely congested. At the base of the brain was an aneurism about the size of a pigeon's egg, springing from the basilar artery, which pressed upon the medulla and upon the pons. The other arteries at the base of the brain were in an atheromatous condition. Dr. L. stated that he had looked over the literature of aneurism of that locality, but had only succeeded in finding a similar one, and that was detailed in Reynolds' System of Medicine, vol. iii.

[Very similar cases will be found tabulated in the Pennsylvania Hospital Reports, vol. ii., and in the Guy's Hospital Report, vol. v. 3d series.—Ed.]

TATTOOED FROM HEAD TO FOOT.—The *British Medical Journal* of November 4 contains an account of a remarkable instance of tattooing of the whole body. According to his own account, the man, a Greek by birth, had been a pirate, and had also carried on brigandage on the continent. Seven years ago, he and five companions were taken prisoners by one of the wild tribes of Asia. Three of them were put to death, but this man, with two others, was preserved alive and literally tattooed over the entire body. The operation lasted two months, and was performed by six men, who each day operated on different parts of the body. The proceeding caused horrible pain, and his two companions died under the treatment. His body is covered from head to foot with delineations of men, animals, and fabulous things. The coloring material used for the figures appears to be indigo, the ground, especially on the chest and abdomen, being vermilion; here and there about a line's breadth of the normal color of the skin can be seen. The hands and the soles of the feet are colored red, but have no figures. On the face and neck are inscriptions in characters resembling Arabic. The skin has the general appearance, to the sight and touch, of bluish-gray velvet. He attends the General Hospital in Vienna; and Professor Hebra, who showed him to his class a short time ago, has had him photographed in various attitudes.

STRYCHNIA IN ALBUMINURIA.—Brignoli (*British Medical Journal*, October 28; from *La Sperimentale*), besides recommending nux vomica in various neuroses, gastralgia, dyspepsia, cardiac palpitations, periodic cough, etc., states that he has observed it to have a marked effect in retarding the progress of albuminuria, especially the scarlatinal form with anasarca. He cites twelve cases of complete recovery.

THE PLACENTA IN MULTIPLE BIRTHS.—Professor Hyrtl (*Baltimore Medical Journal and Bulletin*, October, 1871), from a comparison of a large number of injected placenta, has established a very interesting fact, namely, that whenever twins are of the same sex the vessels of the two umbilical cords are invariably found to anastomose in the placenta, and that when the sex is different this is never the case. In the large number of cases which he has examined he has never once found an exception to this rule. Where there are three chil-

dren, if one be of different sex from the others the vessels of this child will be distinct, while those of the other two anastomose. If the sex of all be the same, however, this distinction is not present. Where he found two separate placentae, the children always differed in sex.

STONE IN THE BLADDER WITH A NUCLEUS OF BONE.—Dr. B. B. Leonard reports the following case in the *Cincinnati Lancet and Observer* (*The Boston Medical and Surgical Journal*, January 4): A boy about 15 years of age presented symptoms of stone, which after some difficulty was detected by a sound of more than ordinary curve. On attempting to remove the stone, it was found firmly imbedded in the wall of the bladder, and almost covered with firm membrane. So firm and strong were the adhesions that much force was required to dislodge the calculus, which was too large for removal intact. Crushing was immediately effected, and fragments weighing three and a half ounces were removed. When the staff was withdrawn, a fragment of bone half an inch long and three lines wide was found lodged in the groove. As the boy had suffered when seven years old from necrosis of the femur, it was thought that a fragment of bone had penetrated the bladder and formed a nucleus around which the calcareous deposit had accumulated; and an examination of the fragments showed this to be the fact.

MISCELLANY.

A NEW WORK BY THE LATE PROFESSOR DUNGLISON.—Messrs. Lindsay & Blakiston announce that they will shortly publish a work entitled "A History of Medicine from the Earliest Ages to the Commencement of the Nineteenth Century," by Robley Dunglison, M.D., LL.D., late Professor of Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College of Philadelphia. The prospectus tells us that, while occupying a professorial chair in the University of Virginia, it became Prof. Dunglison's duty, according to the terms of his appointment, "to teach to the best of his ability, and with due diligence, Anatomy, Surgery, the History of the Progress and Theories of Medicine, Physiology, Materia Medica, and Pharmacy." The full and complete manuscript of his historical lectures, as there delivered, forming a continuous and interesting narrative of events from the earliest origin of medicine to the beginning of the nineteenth century, has been carefully revised for publication by his son, Dr. Richard J. Dunglison, who, deeming it expedient to abandon their original didactic form, has made such slight alterations of the text as seemed necessary to embody the facts presented in the regular book form.

It will be issued in a small octavo volume of about 250 pages, printed on tinted paper, handsomely bound in cloth, bevelled boards. The price to subscribers will be two dollars and a half.

METEOROLOGICAL.—The highest temperature observed during the month of January was 48° F., on the 1st; the lowest was 10°, on the 30th. The mean temperature of the month was 30°.97 F. The average of means since 1790 is 31°.67. The coldest January on record in this city was in 1857, when the mean temperature was only 22°.37; the warmest was in 1790, when it reached 44°. The coldest temperature recorded of late years was 9°.5 below zero, on the 8th of January, 1866.

Snow fell on five different days, and rain on three days only; the total rainfall, including melted snow, reaching 1.27 inches, against 3.47 inches in January, 1871, and an average of 3.28 inches for the month during the past thirty-five years.

PRECAUTIONARY MEASURES AGAINST THE EXTENSION OF SMALLPOX.—The *British Medical Journal* says, "We have before us some particulars of a disgraceful and disgusting affair at Bridgewater. A baker was convicted of selling bread from his shop, his son, who was employed in making the bread, being actually at the time suffering from smallpox and covered with pustules. The disgusting and wicked offence was proved, and a fine of £10 was inflicted." We should be very glad indeed to think that a similar offence in Philadelphia would meet with an equally severe punishment. We doubt very much whether the authorities have taken any steps to prevent trading at houses where the disease actually exists; while many instances of great individual carelessness in regard to the spread of the contagion have come to our knowledge.

THE SENTENCE OF A PHYSICIAN IN 1744.—We take the following from *L'Union Médicale* for December 30:—"Arnauld de Ronsil, a celebrated operator for hernia, was sentenced to undergo the following punishment: 'To make, with his two accomplices, the *amende honorable*, to be whipped, to be branded, and to be sent to the galleys for life.'"

JOURNALISTIC CHANGES.—The *Dublin Journal*, which has up to the beginning of the present year been a quarterly journal, is hereafter to be issued on the 1st of every month.

The January number of the *Chicago Medical Examiner* comes to us in a new form, and is in future to be published on the 1st and 15th of every month.

The *St. Louis Medical and Surgical Journal* will in the future be published monthly, instead of bi-monthly as heretofore. Drs. William S. Edgar and H. Z. Gill are the new editors.

Dr. S. C. Busey and Dr. William Lee announce that they have relinquished their connection as editors with the *National Medical Journal*. "They have been driven to this course by the action of the publishers, Messrs. Judd & Detweiler, who, as proprietors, saw fit to insist upon the insertion of an article which, *in the shape presented*, did not meet with the approval of the editors." The publishers propose to edit and issue the unfinished February number under their own management, purely as printers.

AID FOR CHICAGO.—Dr. Gustav Simon, Professor of Surgery in Heidelberg, and Dr. O. Becker, Professor of Ophthalmology, have issued an address to the medical profession in Germany, soliciting aid in behalf of the medical practitioners of Chicago who have suffered by the recent fire in that city.

COMPULSORY VACCINATION.—We have been requested to insert the following:

"At the suggestion of the Special Committee on Meteorology and Epidemics of the Philadelphia County Medical Society, a Committee was appointed by the Medical Society of the State of Pennsylvania, at its last meeting, to urge upon the State Legislature the importance of making vaccination compulsory throughout its limits, and to frame a bill for the purpose. In pursuance of this most desirable object, the Committee would receive most gratefully any assistance that members of the Society may be willing to render, whether in the way of personal suggestion, or of documents pertaining to the subject, such as copies of the laws of foreign nations, local enactments in our own country, etc.

"On behalf of the Committee,

"BENJAMIN LEE,

"1503 Spruce Street."

RUSH MEDICAL COLLEGE, CHICAGO: SPRING COURSE FOR 1872.—The Rush Medical College building having been destroyed by the great fire, the Faculty, in order to maintain the interests of the College and to preserve its advantages to students of medicine, have secured the lecture- and clinic-rooms of the Cook County Hospital in which to hold the usual Spring Course. The session will begin Wednesday, March 6, and will continue to June 26,—sixteen weeks.

MORTALITY FROM SMALLPOX.—The number of deaths from smallpox in Philadelphia during the weeks ending January 27 and February 3, 1872, were 335, of which 201 were of minors.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending	
	Jan. 27.	Feb. 3.
Consumption	45	39
Other Diseases of Respiratory Organs	46	49
Diseases of Organs of Circulation	12	18
Diseases of Brain and Nervous System	57	44
Diseases of the Digestive Organs	23	18
Diseases of the Genito-Urinary Organs	11	6
Zymotic Diseases	201	180
Cancer	3	7
Casualties	11	8
Debility	27	29
Intemperance	4	1
Old Age	14	25
Scrofula	1	0
Stillborn	24	14
Suicide	2	0
Syphilis	0	0
Tumors	1	2
Unknown	3	2
Unclassifiable	15	9
Totals	500	451
Adults	243	233
Minors	257	218

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JANUARY 19, 1872, TO FEBRUARY 4, 1872, INCLUSIVE.

PETERS, DE WITT C., SURGEON.—By S. O. 16, Department of the South, January 23, 1872, assigned to duty at Lexington, Ky.

STORROW, S. A., ASSISTANT-SURGEON.—By S. O. 19, War Department, A. G. O., January 9, 1872, relieved at Fort Jefferson, Fla., and to proceed to Philadelphia, Pa., reporting thence by letter to the Surgeon-General.

HUBBARD, VAN BUREN, ASSISTANT-SURGEON.—By S. O. 19, War Department, A. G. O., January 23, 1872, relieved from duty at the U. S. Military Academy, West Point, N.Y., and assigned to duty at Fort Jefferson, Fla.

BREWER, J. W., ASSISTANT-SURGEON.—By S. O. 17, Department of the Missouri, January 29, 1872, to return to Fort Larned, Kansas, and resume his duties at that post.

KOERPER, EGON A., ASSISTANT-SURGEON.—By S. O. 5, Department of Texas, January 9, 1872, granted leave of absence for thirty days, with permission to leave the limits of the Department.

GIRARD, JOS. B., ASSISTANT-SURGEON.—By S. O. 22, War Department, A. G. O., January 26, 1872, assigned to temporary duty at Newport Barracks, Ky.

WILSON, W. J., ASSISTANT-SURGEON.—By S. O. 15, District of New Mexico, January 25, 1872, assigned to duty at Fort Selden, N.M.

FITZGERALD, J. A., ASSISTANT-SURGEON.—By S. O. 19, War Department, A. G. O., January 23, 1872, assigned to duty at the U. S. Military Academy, West Point, N.Y.

MOFFATT, P., ASSISTANT-SURGEON.—By S. O. 28, War Department, A. G. O., February 2, 1872, granted leave of absence for thirty days.

CORSON, J. K., ASSISTANT-SURGEON.—By S. O. 11, Department of the Platte, January 20, 1872, granted leave of absence for thirty days, with permission to apply for an extension of thirty days.

FRIDAY, MARCH 1, 1872.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON TWO CASES ILLUSTRATING THE POINTS OF DIFFERENCE BETWEEN ACUTE PHTHISIS AND ACUTE TUBERCULOSIS.

BY JAMES H. HUTCHINSON, M.D.,

President of the Pathological Society of Philadelphia; one of the Attending Physicians to the Pennsylvania Hospital.

THE two cases which have suggested this lecture were under my care in the men's medical ward of the Pennsylvania Hospital last year. They both ran an acute course and presented many points of similarity with each other; but there were also points in which they were unlike, and these enabled me to recognize in one instance the presence of acute phthisis, and in the other, of acute tuberculosis. A post-mortem examination in each case fully confirmed the diagnosis. There are many able physicians who refuse to admit the existence of any material difference between these two diseases; but surely to separate two conditions so readily distinguished during life, and characterized after death by such different lesions, ought not to be looked upon as an over-refinement in diagnosis.

Acute phthisis I believe to depend upon a rapid degeneration of the products of a low form of inflammation of the lungs. The origin of acute tuberculosis is not quite so well understood.

The cases are reported briefly in abstract, in order that the diagnostic symptoms in each may be prominently brought out.

Case I.—D. McG., æt. 18, born in Philadelphia, was admitted into the medical wards of the Pennsylvania Hospital on the 13th of March, 1871. His prominent symptoms at that time were emaciation, fever, subsultus tendinum, carphologia, muttering delirium during the daytime, occasionally violent delirium at night, and dry and smooth tongue. There were no tympany, no diarrhoea, and no rose-colored spots on the abdomen. It was not until the 18th that I learned that the patient had no hereditary tendency to phthisis, that his illness began as bronchitis about five weeks before he came under my care, but that it was not until March 4 that he had been obliged to give up work and go to bed. Upon examining his chest I found that there was dulness posteriorly over both sides, but most marked over the left side, where there was also bronchial respiration on a level with the spine of the scapula. On the 20th he was free from delirium, and able to corroborate the history just given. At this time the abdomen was noted as being scaphoid in shape, and covered with sudamina. The tongue was clean and moist, but fissured and red. There was slight diarrhoea. The physical signs continued as before. On the 23d there was an improvement in all the symptoms; no elastic tissue could be detected in the sputa.

On the 24th the patient was not quite so well. A careful physical examination of the chest showed that there was dulness over the whole of the left side of the chest posteriorly, and in a less degree in front down to the third rib, and that bronchial respiration and moist crackling were heard in the superior scapular and the infra-clavicular regions. The patient suffered from profuse sweats. The symptoms increased in severity, the physical signs indicating extensive destruction of the left lung and commencing disease at the apex of the right lung, until his death, which occurred on the 14th of April.

The autopsy showed that the physical signs had been correctly interpreted; caseous degeneration and excavations being found in both lungs.

The following is the record made of the pulse, respiration, and temperature during a portion of the time he was under treatment:

	A.M.			P.M.		
	Pulse.	Resp.	Temp.	Pulse.	Resp.	Temp.
March 13.....				126	36	104
" 14.....	106	28	100½	118	38	104
" 15.....	118	28	100	112	34	102
" 16.....	104	38	100	112	34	102½
" 17.....	104	28	99	116	40	102
" 18.....	112	38	101	118	44	102
" 19.....				120	44	102
" 20.....	126	46	101	120	40	102½
" 30.....				130	58	103
" 31.....	120	40	101	136	36	101
April 1.....	120	30	99	134	26	102
" 2.....				135	40	102
" 3.....	120	40	100	130	44	101

Case II.—J. B., æt. 25, single, born in Ireland, puddler, was admitted into the medical wards of the Pennsylvania Hospital April 13, 1871.

His mother died of typhus fever, aged 30 years. His father is still living, in good health. No history of phthisis in any branch of his family could be discovered. He stated that his health had always been perfectly good up to the beginning of March, 1871, when through exposure incident to his occupation he caught what he described as a severe cold. This was accompanied by sharp pain in his chest, much shortness of breath, and fever, but by little cough or expectoration. From this condition he recovered sufficiently to resume his former occupation. Three weeks later, while still suffering slightly from this attack, his cough increased in severity and frequency; his expectoration occasionally contained streaks of blood, and very rarely consisted of blood alone, but at no time was there a large amount spit up. He also stated that he had had a chancre; but there was no reason to believe that he had ever suffered from secondary syphilis. When admitted, his appetite was good, his bowels were regular, his urine was acid and had a specific gravity of 1024; it contained no albumen and no sugar. He was suffering from a slight cough and some mucous expectoration. The physical signs were as follows: some dulness on percussion over the lower part of the left lung posteriorly. The respiratory murmur on both sides was harsh and somewhat blowing; the expiratory murmur was prolonged. Sonorous and sibilant râles were heard in the interscapular region. A loud blowing systolic murmur was heard near the ensiform cartilage. On the 30th of April the physical signs were scarcely more distinctive than on admission, the dyspnoea was extreme, and there was evidence of deficient aeration of the blood in the blueness of the lips, nose, and finger-ends.

The diagnosis was acute tuberculosis of the lungs.

Appended is the record of his temperature, pulse, and respiration, as taken from the time of his admission until his death, which occurred May 10, after he had passed from under my care into that of my colleague, Professor J. A. Meigs, who permits me to make the following extract from the post-mortem book:

	A.M.			P.M.		
	Pulse.	Resp.	Temp.	Pulse.	Resp.	Temp.
April 17.....	92	24	98	104	30	102½
" 18.....	104	24	100	98	26	98
" 19.....	96	24	100	90	24	99
" 20.....	104	26	98½	92	24	101
" 21.....	102	28	101	96	26	99
" 22.....	106	28	101	97	24	98
" 23.....	104	26	100			
" 24.....	110	30	102	100	20	98
" 25.....	110	30	101	90	26	98
" 26.....	104	30	102	94	30	100
" 30.....	98	26	99	114	32	103
May 1.....	104	32	100	110	34	101½
" 2.....	112	30	99	106	28	100
" 3.....	104	30	100	104	30	100
" 4.....				106	30	100

"Autopsy twelve hours after death. Rigor mortis well established. Emaciation not marked. Thorax.—Abundant pleuritic effusion in right cavity, also a few recent adhesions; right pulmonary pleura thickened. Left pleural surfaces

tightly adherent throughout a considerable portion of their extent, mostly at apex and posteriorly. Thick false membrane over the remainder of the pulmonary pleura. Sac contained serum, mingled with blood and pus.

"The whole of both lungs studded with miliary tubercles; abundant purulent exudation escaped on section.

"No cavities were discovered.

"*Heart*.—Right auricle dilated; bicuspid valve insufficient. Walls of left heart increased in thickness.

"*Liver* congested.

"*Spleen* enlarged and friable.

"Glands in the anterior mediastinum enlarged and indurated; no cheesy appearance."

There can be no doubt, both from a consideration of the post-mortem appearance and of the physical signs presented by the patient when I last examined him, that the right-sided pleurisy was set up after he passed from under my care. The pleurisy on the left side, on the contrary, had doubtless been the cause of his first illness, and possibly indirectly of the fatal one; for the pus in the pleural sac was evidently old and thickened, and the serum and blood with which it was mingled had in all probability been extravasated only a short time before death.

As I have said, the cases resemble each other in some points and differ in others. Let us compare them. They both ran an acute course, each coming under my care soon after the commencement of the morbid process, and remaining in the wards of the Pennsylvania Hospital about a month, when death took place. Both patients presented some of the general symptoms of disease of the lungs; in both the respiration was frequent, the temperature elevated, and the pulse accelerated; both had had an illness prior to that for which they sought admission to the hospital. But here the resemblance ceases. In the first case, the symptoms at first suggested to all who saw the patient the impression that he was suffering from typhoid fever, but upon closer examination many of the characteristic symptoms of that disease were found to be absent. The history indicated bronchitis, or possibly catarrhal pneumonia, as the starting-point of the disease. Very soon after his admission, evidences of consolidation of parts of the lungs were detected by the physical methods of diagnosis, and about ten days later crackling râles could be heard in positions where bronchial respiration and dulness had been discovered. But during the whole of this patient's illness there was never more interference with the respiration than could be satisfactorily accounted for by the physical signs. Moreover, during the last three weeks of his life all the general symptoms could be referred to the disease of the lungs which was known to exist. The temperature-record shows that there were marked evening exacerbations, the thermometer frequently recording a temperature in the evening three degrees higher than in the morning. This is, of course, always the case in any disease in which hectic occurs. The sweating was also a marked feature of the case, and was quite as profuse as we generally see it in cases of chronic phthisis. The sputa, too, a short time after admission, were of the character usually found in cases in which rapid destruction of the lung is taking place.

In the second case, the pleurisy which had occurred a few weeks before the patient's admission to the hospital had left traces which were distinctly recognized when he first came under my care. In this case there were symptoms which the physical signs did not explain; for these, it will be remembered, were at no time, when taken by themselves, indicative of serious disease of the lungs. Thus, the dyspnoea was extreme, there was cyanosis of the finger-ends and of the lips, while upon percussion the dulness due to the previous pleurisy could only be detected, and auscultation revealed the presence merely of harsh respiration, sonorous and

sibilant râles, and some prolongation of the expiratory murmur. Cough was a constant symptom, but it was dry and hacking, or was accompanied by the expectoration of a small quantity of mucus, which was sometimes, but not often, streaked with blood. Sweating very rarely occurred.

The temperature noted in this case was high, but not so high as the preceding, and the diurnal range was also marked,—much more marked than is usual in cases of acute tuberculosis. But, whereas in the former case the exacerbation occurred in the evening, in this case it occurred in the morning; and you will find that this sometimes happens when tuberculosis has supervened upon phthisis, as well as when it is, as in this case, an original affection, or, to speak more correctly, has not been preceded by any disease of the lungs.

The existence of a systolic murmur at the ensiform cartilage, together with the increased area of percussion-dulness in the region of the right ventricle, indicated that the right ventricle was dilated,—a condition which it seems to me must almost of necessity occur in consequence of the stasis of blood which results from the interference with the circulation which a large number of miliary tubercles in the lungs must exert. The blueness of the lips and finger-ends undoubtedly arose from this venous congestion; and it was difficult to explain this in any other way, since there was no history of previous disease of the heart.

It was impossible to convince all who saw the patient with me that he was really the subject of so serious a disease as acute tuberculosis. There was in this case no marked prostration, sweating, or profuse expectoration, as in the other case, which, taken together with the absence of the physical signs of disease of the lungs, seemed to the minds of some to render untenable the diagnosis I had made.

I have on a former occasion endeavored to explain to you in what way phthisis is produced, and I intend in this lecture to attempt to give you some idea of the pathology of tuberculosis. Niemeyer, in his "Clinical Lectures on Pulmonary Phthisis," says that "tuberculosis, in most cases, is a secondary disease, arising in a manner not known to us through the influence of caseous morbid products on the organism."* These caseous morbid products are more usually found in the lung, but in some cases of tuberculosis, as in the one under consideration, we have to look for them elsewhere. In such cases we shall find the glands diseased, or perhaps an inflammatory exudation on the pleura, the peritoneum, or elsewhere, presenting evidence of caseous degeneration. Otitis, caries of the bones, and other affections accompanied by much suppuration are said in some instances to have given rise to it.

It is difficult to understand in what way these caseous products within the body excite the deposition of miliary tubercles in the various organs of the body. Tuberculosis has been artificially produced in the body of the lower animals by the inoculation of various substances, which, however, have always this in common,—that they contain corpuscular elements; and, provided these be not destroyed, the substance to be inoculated may be acted upon by various chemical agents without impairing its power to produce the disease. If tuberculosis may be caused by the introduction of corpuscular elements from without, there can be no reasonable objection to the acceptance of the hypothesis that this infection or inoculation may sometimes be due to the absorption of corpuscular elements contained within the body, it matters not in what pathological process they may have originated. These, when absorbed, act as foreign bodies, and cause within the blood-vessels a derangement of the circulation, which may in some

instances amount to partial stasis. As a consequence of this, there is an extravasation of a number of the white corpuscles of the blood, which generally carry with them these foreign bodies, and, collecting together in a mass, form the basis of a tubercle, which is completed by the growth of a capsule of connective tissue around it.

We learn from the record of the post-mortem examination in J. B.'s case that the left pleural cavity contained thickened and caseous exudation, and I think we must trace the occurrence of acute tuberculosis to absorption of some of the corpuscular elements it contained. It is difficult to understand why tuberculosis is set up in only a small proportion of the cases in which the predisposing cause is present. Perhaps many phthisical patients escape tuberculosis in consequence of the protection afforded against absorption by the increased growth of connective tissue, which often forms a capsule around the caseous matter in the lungs. This view is sustained by the fact that, as was known to Laennec, a deposition of miliary tubercles often occurs a short time before death, when by reason of the softening and destruction of the lung, which is very apt to occur in the last stages of the disease, the protecting barrier may be supposed to be broken down. The attempts to produce tuberculosis in the lower animals are not uniformly successful, and it is therefore not unreasonable to suppose that the cases in which everything seems to be favorable to it, and which yet escape the infection, do so in consequence of the absence of an unknown but important factor.

ORIGINAL COMMUNICATIONS.

FIRST ANNUAL REPORT OF THE DISPENSARY FOR SKIN DISEASES, PHILADELPHIA.

AN ANALYSIS OF THE DISEASES TREATED.

BY LOUIS A. DUHRING, M.D.,

Physician in Charge.

THE "Dispensary for Skin Diseases" was incorporated as a charity for the gratuitous medical relief of the poor affected with diseases of the skin, and also for the promotion of the science of medicine with reference to the treatment of these diseases. It was opened to the public upon the 7th of January, 1871. During the year which has just terminated, four hundred and twenty-five cases were admitted and treated, a few of which it is my purpose in the present communication to refer to. The whole number of distinct diseases observed and included in the appended table was thirty-nine, which occurred in the following frequency:

Eczema	185	Lupus erythematosus	2
Syphiloderma	46	Chloasma	2
Acne	28	Elephantiasis Arabum	2
Seborrhoea	27	Alopecia areata	2
Psoriasis	20	Comedones	2
Pruritus cutaneus	14	Herpes iris	2
Tinea versicolor	11	Sycosis non-parasitica	2
Urticaria	10	Dermatitis traumatica	2
Phtheiriasis	9	Varix	2
Scabies	7	Sebaceous tumors	2
Ichthyosis	5	Erysipelas	1
Epithelioma	5	Carcinoma	1
Lichen pilaris	5	Herpes zoster	1
Erythema	4	Callositas	1
Serofuloderma	4	Condylomata	1
Ulcers	4	Onychia	1
Lupus vulgaris	3	Irregular vaccinia	1
Furuncle	3	Milium	1
Rosacea	3		
Tinea tonsurans	2	Total	425
Tinea circinata	2		

Before referring to particular affections, it will not be out of place to make a few remarks regarding them as a whole. The cases were essentially of a chronic character, many of them indeed of years' standing, while comparatively few were seen as acute diseases. For instance, of the large number of eczemas, the vast majority were cases of severity and of long duration, applying at the dispensary merely as a last resort.

Unfortunately, this experience with chronic cases falls to the lot of all newly-established institutions, and serves perhaps as a test of their worth, undesirable as it may be to the physician. The relative frequency of diseases, as exhibited in the above table, does not give a correct idea of their actual occurrence in a community; for it must be remembered that only the severer and more disfiguring diseases, together with those which incapacitate for work, apply at such institutions. Many of the disorders of which there are but one or two examples recorded are known to be of common event, yet not incommencing the person to any extent, or, running an acute benign course, they escape observation. Therefore it is only by viewing statistics with very large figures, gathered from all sources, that a true approximation of the relative frequency of skin diseases is to be obtained.

It will be noticed that a very large proportion of the cases are included under the name of eczema. With modern nomenclature this name is made to embrace a number of appearances due to the same pathological cause, which in former times were each honored with a name and a multitude of synonyms. Hence, in the table will perhaps be missed a number of old familiar words, such as lichen simplex, impetigo, etc. etc. These processes are all to be found under the head of eczema, where they properly belong. By this arrangement, based upon pathological research, dermatology is rid of many superfluous terms, and our nomenclature greatly simplified. The varieties of eczema are considered under five divisions.

Of eczema vesiculosum, the typical variety of this disease, there were only twenty-five examples,—a remarkably small proportion, considering the whole number of eczemas. This is accounted for by the fact that cases rarely applied for advice in the early stage of the disease, the patients allowing the affection to assume the character of an eczema rubrum before coming under notice.

By the term eczema rubrum or madidans, I mean those cases of the disease characterized by a red, moist, excoriated surface, giving forth a viscid exudation which has a tendency to dry and form crusts. This condition is often caused by the tearing open and scratching of a previously typical vesicular eruption; also by the application of irritants. Of this variety, the one most commonly encountered in dispensary and hospital practice, fifty-two cases presented themselves. Many of these were of five, ten, and twenty years' standing, and seemed to resist everything but the most heroic treatment. Not a few were the well-known weeping eczemas of the legs, which are of such frequent occurrence in all communities. When at all practicable, these patients were treated with a course of *sapo viridis* and ungt. diachyli, according to the method first described and laid down by Hebra. The time requisite for the cure of these chronic eczemas of the leg naturally varied, according to the circumstances attending individual cases; but when the treatment was satisfactorily carried out, two months were usually found to be sufficient for a good result. Had they been provided with hospital accommodations, a shorter time doubtless would have sufficed. Of the great superiority of this plan of treatment over all other methods for cases of eczema rubrum, I would speak in the most emphatic terms. Care and attention should of course be exercised in giving the

most minute instructions to the patient in regard to the exact manner of making the applications. Without these definite directions for the employment of the soap and ointment, no success with this method need be anticipated; for the result rests much more with the *manner* of application than in the remedies themselves. But when the patient is made to comprehend the different steps of the treatment the plan is eminently successful, even in dispensary practice.

It is to Professor Hebra, of Vienna, that the profession and community at large are indebted for this valuable method of therapeutics in eczema rubrum.

Under eczema papulosum I have included all those cases which in former times were denominated lichen simplex, lichen agrius, strophulus, lichen tropicus, etc. This papular form of the disease was of common occurrence, forty-one cases having been observed. It was generally found to be associated with an impaired state of health, and occurred oftener in females than in males. It was observed to have a predilection for the arms, legs, and thighs. Internal treatment was here resorted to with marked beneficial effect.

There were twenty-seven cases of eczema squamosum, a number of which were of some duration and involved large portions of the body. Respecting the treatment, tar and its preparations were found most useful in many of these cases, the disease yielding to this remedy when other means failed. An ointment composed of pure *pix liquida*, *adeps*, and cerate, in the strength of one drachm of the tar to the ounce, answered the purpose very well. Here I would remark that, as a rule, tar is employed to greater advantage in small proportions rather than in large quantities. Many cases of eczema will do well under a mild preparation of this substance, whereas if the strength be doubled the skin will resent it. In two or three instances, however, where there was an idiosyncrasy, the tar acted as a poison to the skin, and its use had to be discontinued at once.

There were but twenty cases of eczema impetiginosum. This is the variety so commonly found upon children, attacking particularly the face and scalp. It shows itself in the form of pustules of various size, generally isolated, which run their course rapidly, desiccate, and leave large greenish-yellow crusts. It is the pustular exhibition of the disease.

There are still nineteen cases of eczema to be accounted for; these I have grouped under the title of eczema artificialis, the result of external irritation. Quite a number of them presented the appearances known by the name of eczema fissum or rimosum, consisting of fissures or rhagades, occurring particularly about the hands, fingers, and joints, accompanied by other symptoms due to the same mechanical irritation. This was observed in those whose occupations compelled them to work with irritants, as, for instance, type-setters, washerwomen, grocers, fishermen, etc. Several patients poisoned by aniline applied for advice; while two or three were the subjects of the familiar rhus poisoning. Lastly, more than one example of artificial eczema came under notice produced by the indiscriminate application of sulphur and its compounds, white precipitate ointment, *sapo viridis*, mercurial ointment, croton oil, and the many quack preparations which too often monopolize the apothecary-shops; all of which are supposed to possess virtues for the cure alike of eczema, pruritus, and acne!

The extent to which these secret preparations are used in our city is incredible, and almost beyond calculation. Many were the instances where patients sought the dispensary penniless and in a deplorable condition, having squandered their entire means upon these worthless nostrums.

The proportion of the syphilodermata, compared with the sum-total of diseases recorded, is small; and here

it must be stated that this number excludes all cases of primary accident, these not being admitted to the institution. Most of the cases were those whose eruptions belonged to the late stages of the disease, including tubercles, ulcerations, and gummata.

It was rare to find patients conscious of the fact that they were the subjects of the disease in question. Many of the cases were middle-aged women, married and with families, who had had the disease for some time, but were entirely ignorant of its cause or nature. Of hereditary syphilis there were four examples. Two were girls, nine and fifteen years of age, both of whose parents were known to be laboring under syphilis. The mother of the younger of these patients was also under treatment for a tubercular eruption upon the forehead. The older girl was suffering with extensive ulceration of the end of the nose, and other symptoms of a grave character, which yielded with remarkable rapidity to full doses of iodide of potassium. One girl presented a striking example of the "notched central incisor teeth."

The number of acne patients who applied for advice and relief is not so great as one would anticipate, considering the frequency with which this trouble shows itself in every community. Only twenty-nine cases presented themselves, and the majority of these were of a mild type. Several, however, were of severe intensity, and demanded both local and internal treatment. The case of a rag-picker, forty-five years of age and in poor health, who came to the clinic with a severe acne pustulosa of the face which he had had for several years, illustrates well the necessity for both plans of treatment in certain instances. This man was ordered cod-liver oil, iron, and bark internally, while a dressing of diachylon ointment, together with the use of castile soap, constituted the external treatment. He recovered rapidly, and was discharged within two months from the time of his admission. Where the complaint was evidently dependent upon irregularity of habit, constipation, feeble digestion, and similar disorders, most gratifying results were obtained from the employment of aperient tonic mixtures. In such cases iron, magnesia, gentian, quassia, and the like remedies, afford us most excellent means for combating this annoying disorder of the sebaceous glands. In addition, such local applications, whether soothing or stimulating, are to be used as appear to be indicated in the individual case; for here no one prescription can be offered, each case demanding its own remedies and mode of treatment. With attention to the form of acne which each case presented, and bearing in mind the above remarks as an outline for treatment, the affection was not found to be the chronic and unsatisfactory one so often alluded to.

By the name *seborrhœa* is meant that affection which consists of an excessive secretion of the sebaceous glands, which, with the impregnated fatty epidermic scales, forms either in masses or as a greasy coating upon the surface. It may attack any portion or the whole of the body, but is generally met with as a local affection. Its common seat is the scalp, and when occurring here it constitutes the trouble known as "pityriasis of the head," or popularly as "dandruff;" but the better name is *seborrhœa capitis*. There were twenty-one cases of this disease recorded as occurring upon the scalp, while but six were observed upon the face and body. The affection is one which may show itself at all periods of life, though it is more frequently met with in the young and the old. In the majority of the cases observed at the dispensary, the disorder was found to be connected either with *anæmia* or chlorosis,—a fact in regard to its etiology which has been dwelt upon at length by other observers.

Seborrhœa if left to itself may continue for years, and in such cases is well known to be a most productive

cause of premature baldness. The treatment found to be most effectual, and generally employed, was a combination of the internal and external. The preparations of iron, together with good food, exercise, and fresh air, were prescribed, with excellent result. Simultaneous attention, however, to the local treatment was quite as important as the use of internal remedies; for in this condition of the skin the parts need a certain amount of stimulation in order to bring about a healthy action. To accomplish this end, the use of the *spiritus saponis kalini* (a solution of *sapo viridis* in alcohol), as recommended by Prof. Hebra, followed by the application of a stimulating oil, was ordered. The disease proved readily amenable to this general plan of treatment.

Of psoriasis, twenty examples applied for relief. Many of them were of long standing, and of the obstinate nature so usual with this singular and troublesome affection. In only two cases were the subjects in ill condition; these were young girls of eighteen, whose health had been broken by scarlatina in childhood, and who had since been affected with an extensive and diffuse psoriasis. One of these has recently had variola, since which time her psoriasis has entirely left her. With the exception of these cases, the other patients presented comparatively mild grades of the affection, and were greatly benefited by external treatment. Internal remedies were resorted to, but with indefinite results.

For years past the word *pruritus* has had such a vague meaning, and has been employed to express so many conditions, that when used, even at the present day, it becomes necessary to define one's interpretation of the term. By *pruritus* is meant an itching sensation in the skin, which may be localized or universal, attended by no visible alteration in the skin itself, except that produced by scratching. The causes of this trouble are various, and generally remote from the seat of the annoyance. It is *never* due to the presence of pediculi or parasites of any kind. Of this affection there were fourteen examples, several of which were of long standing and severity. Attention to the functions of the various organs, which were often found to be deranged, together with the use of baths, constituted the general plan of treatment. Of true *prurigo* no examples came under notice.

The affections due to vegetable growths upon the skin were of infrequent occurrence, compared with the statistics of similar institutions in other cities. Of *tinea versicolor*, however, there were eleven examples, several of them of twenty years' duration. But of *tinea tonsurans*, the common ringworm of the scalp, due to the presence and growth of the *trichophyton fungus*, there were only two cases. There were likewise only two cases of *tinea circinata*, the ringworm of the body not involving the hairs, but produced by the same *trichophyton* as the *tonsurans*. These numbers are strikingly small, and of course give no conception of the relative frequency with which these troubles occur. The *tinea versicolor* cases were remarkable for the amount of surface involved with the parasite; in the course of a few weeks, however, they yielded readily to appropriate treatment. The fungus is one which is easily reached, and has but a slight hold upon the body if the proper remedies are employed. A systematic course with *sapo viridis* constituted the usual plan of treatment. The affection should not be confounded with *chloasma*, a pigmentary deposit, which it often resembles; nor should *vittilio* be mistaken for *tinea versicolor*,—a disease which in some respects is very similar in appearance.

Urticaria.—Ten instances of this odd affection came under notice. The variety appearing in the form of round, solid elevations or papules—*urticaria papulosa*—occurred most frequently, and was found in the majority of cases to be intimately connected with disarrangement of the alimentary canal. Treatment directed

against the cause, in such instances, proved the correctness of the view entertained. Several cases of chronic and universal *urticaria* which had persisted for years were likewise discovered to be entirely dependent upon disorder of the digestive tract, though in no proportion to the appearances of the eruption; these also yielded to appropriate remedies. Lotions composed of alcohol and camphor were found to be of service in allaying the intense itching during an outbreak.

Phtheiriasis, under which term I include all cases of lousiness, together with the symptoms and appearances produced by the presence of the pediculus, was of exceedingly rare occurrence. In New York, Boston, and other large cities, this trouble is much more frequently encountered than with us. For cases of *pediculi capitis*, petroleum was used as a parasiticide, and with satisfactory results. It is a reliable remedy for such purposes, and one which can be employed with safety. No danger need be apprehended from its use upon the scalp. An ointment of adeps and *staphisagria* was found to answer the purpose in *pediculi pubis*. The number of scabies cases is remarkably small, and when compared with the statistics of institutions in other cities, it will be seen that Philadelphia is comparatively free from this unpleasant parasite. In Paris, scabies bears about the same relation in frequency of occurrence that eczema does with us. About half of the diseases of the skin in that city are due to the *acarus scabiei*. It possesses more scabies than any other city in the world.

Five examples of *ichthyosis* were observed. All of them were of a mild type, their condition doubtless being much ameliorated by attention to bathing and inunction. In this connection it is interesting to remark that the patients who came under observation at the dispensary, taking them as a whole, were, though poor, surprisingly cleanly in their persons. This fact at once accounts for the infrequency of such affections as the *tinea*, scabies, *phtheiriasis*, etc., which are propagated by contagion and inattention to cleanliness. The squalor and absolute poverty so common in London, Paris, and other large cities of Europe, occur only exceptionally in our city, where water and soap are the poor man's luxury. In connection with several of the *ichthyotic* patients it was noted that *eczema* was present; and it was indeed for this latter trouble that these cases sought advice.

The term *lupus vulgaris* is employed to denote a definite disease, which runs a slow course and possesses a characteristic clinical history. It consists of a cellular infiltration of the skin, tending to slow ulceration and destruction of the parts invaded, and accompanied by extensive cicatrization. In no instance is the cause syphilis. Syphilitic ulcerations, which at times bear a resemblance to certain forms of *lupus*, and which have by some unfortunately been termed *syphilitic lupus*, are considered under a different head. The view adopted maintains that there is no direct relation between syphilis and true *lupus*, the two diseases being distinct. Three cases were observed; two of them—severe cases, which were under notice for some months—recovered under the employment of internal remedies alone, the treatment consisting of iron, cod-liver oil, and iodide of potassium. Two examples of *lupus erythematosus*, or *seborrhœa congestiva*, which perhaps is the better name, came under treatment. One case was that of a girl of nineteen, who, with the exception of a beginning *lupus erythematosus* upon her nose, possessed a remarkably fine complexion. The disease was of six months' duration, and well marked. She was otherwise in excellent health, and had no symptoms of *scrofula*. Applications of the *spiritus saponis kalini*, followed by a mild mercurial ointment, were used with good effect, the disease yielding slowly but perceptibly to these remedies. When last seen, she had almost recovered.

By reference to the table it will be seen that numerous other diseases were encountered, but mostly as single instances. Want of space forbids entering into further detail concerning these cases, several of which were of interest and possessed points worthy of note.

ON VIRGIN VACCINE LYMPH, AND LYMPH OF THE EARLY REMOVES, AS COMPARED WITH ORDINARY HUMANIZED VIRUS.

AN ANALYSIS OF SIXTY CASES.

Read before the Philadelphia County Medical Society, January 24, 1872.

BY BENJAMIN LEE, M.D.

IT is not my purpose in the following brief notes to enter into any extended discussion or historical review of the subject of vaccination, or to present the views of other observers, but simply to offer the facts in regard to a limited number of cases in which I have made use of the virgin lymph, or lymph of the early removes, and, by a careful analysis of these, to deduce certain conclusions which have impressed themselves strongly on my own mind in regard to the comparative merits of juvenal and humanized vaccine, and which may, I venture to hope, prove of practical use in determining under what circumstances either should have the preference. The number of observations which I have to offer is, as I have said, limited. They owe their significance to the conditions under which they were made.

At the outbreak of the present epidemic—for such, in opposition to the direct assertions of the sapient editors of our daily journals, I venture to pronounce the existing prevalence of variola in our city—I found myself entirely without this most important and potent of all prophylactics. Having been for a number of years engaged in the pursuit of a special department of medical art, I had not been able to keep up that unbroken succession of healthy babies which would put me in possession of the rather questionable treasure, of which some gentlemen have here made boast, of virus of twenty years' or any number of years' descent. I was therefore compelled to beg. This I did of the nearest vaccine physician. He complained of the difficulty of obtaining matter for his own use, and of the entire absence of any provision for such an emergency as the present on the part of the city authorities; and did not commend very highly the minute scrap of crust which he was good enough to let me have. The result justified his want of enthusiasm. The three cases in which I made use of it were revaccinations, at the ages respectively of nine, eleven, and twenty-five years. In the first two a slight amount of irritation followed immediately, and disappeared in two or three days; in the third no effect whatever was produced. Disgusted with this result, and in great straits for a further supply of a more reliable article, I was relieved to learn from the Messrs. Wyeth that they had received from Germany a number of capillary tubes containing lymph from the cow. I was the readier to experiment with this article, from the fact that the father of a family in which I had recently lost a patient from a strumous affection of the spine was thoroughly convinced that this disease had been introduced into her system by vaccination, and had therefore expressed his unalterable determination that not one of his remaining children should be vaccinated. It was only on my assuring him that this virus had never run the risk of human contamination, that he gave his consent to the operation. I immediately procured a sufficient number of tubes to meet my immediate necessities, and went to work, expecting astonishing results. I was not disappointed. Of eighteen cases which I vaccinated during the next two days, not one was apparently successful.

I felt that I was reduced to one of two conclusions: either that my right hand had lost its cunning, or that German bovine lymph was a fraud. At last, on the sixth day, when I was beginning to despair of ever obtaining a result, one of these first eighteen, in the arm of a fine healthy young girl from California, thirteen years of age, in whom vaccination had never before been attempted, showed signs of life. With the exception of this prolonged incubation, it proved in every respect a type-case of vaccinia. The sore, in the regularity of its march and perfection of its contour, would have delighted the eye of the great apostle of the art himself; while the general symptoms were pronounced, though neither the local nor the constitutional manifestations were exceptionally severe. I began to resume my faith in humanity in general, and bovinity in particular. On the sixth day from the commencement of the vesicle, it being then mature, I punctured it, vaccinating two persons directly from the arm and securing a considerable quantity of the lymph on quills, one of which I used in a third case on the same day. These were all revaccinations, after an interval of three years. One of them, in a child six years old, suffering from an affection of the hip-joint, who had been successfully vaccinated three years before, took perfectly, making a large sore, perfectly regular, with this singular exception: at about the eighth day its margin had nearly reached the scar of his former vaccination, when what was my surprise to see the latter become inflamed and assume every appearance of a regular sore, with a threatening of pustulation! This, however, did not ensue. In three or four days it subsided with the subsidence of the new sore, and left no increased cicatrix. The other two were adults, both of whom had decided vaccinella, with large but irregular sores. As I find that lymph-vaccination is not in favor with practitioners in this city, I may be pardoned for making a digression here to say a word in its behalf, and to describe the easiest means of taking and preserving the lymph for short periods, and of introducing it. The proper time for taking it is that of perfect maturity of the vesicle, while still white and translucent, before pus has begun to form; this will be about the sixth day from the commencement of the vesiculation, usually the eighth or ninth from the date of the operation. The point of the lancet should be carefully introduced into the side of the vesicle at different points along its outer edge, the blade being parallel to the surface of the arm. Otherwise, if the blade be held obliquely and the point directed against the surface, the dermis may be wounded, when blood will mix with the lymph and vitiate the operation. For the same reason, no pressure whatever should be made use of in order to obtain it. The elasticity of the tissues will gradually force it to exude, and it will be seen in little pellucid bead-like drops at each of the punctures. The lancet may now be charged with this, and it may be transmitted directly to other patients, or it may be collected on small pieces of quill for future use. No precaution is necessary to prevent inflammation in the punctured vesicle, if the operation has been carefully performed. The escaping lymph will soon desiccate, and the pustule run its course undisturbed. If it shows a tendency to weep, a little oxide of zinc, in powder, dusted on, will check this.

The advantages of arm-to-arm-vaccination, and, to some extent, of quill-vaccination, are, first, its great *certainty*; second, *economy of time*,—as we can make use of our fresh matter on the eighth or ninth day, while for our crust we are obliged to wait three weeks,—often longer,—a matter of the most vital importance in the presence of an epidemic, or of immediate exposure to infection; and third, *economy of material*; since we can vaccinate a dozen or twenty cases, or obtain as many quills, which will vaccinate the same number of cases,

and still have our scab unimpaired in its turn. The mode of taking the lymph on the quill is as follows: An ordinary quill-toothpick is split up into pieces an inch long and a quarter of an inch broad, pointed at one end, square at the other. The convex surface at the square end is scraped with the edge of a penknife for a space of a third of an inch, in order to afford a roughened surface which will attract and retain the lymph. This roughened portion is then gently applied in its whole extent to the exuding surface, and left to dry, which it will do in a few minutes. When dry, the lymph will give a glistening varnished appearance to the surface of the quill. These pieces of quill may be kept in small glass tubes, as these have been which I show you, or wrapped up in foil. They will retain their virtue at least as long as a scab under similar circumstances. In using them, the surface is abraded as in using the scab, and the broad end of the quill is dipped for an instant only in tepid water, and then rubbed over the denuded dermis. It is much more expeditious than the operation with the scab, saving the laborious and tedious process of grinding the crust, and is accompanied by no waste of material, as the latter invariably must be. It is also cleaner and less offensive to a fastidious patient, and I am confident, to say the very least, not a whit less efficacious. It will be observed that this method differs altogether from that known as the quill-point operation, in which the operator is directed to make a puncture with the point of his lancet through the skin, and then insert the charged point, leaving it in the wound. That operation I consider to be liable to the very grave risk of causing phlegmonous inflammation and abscess, as it is rational to suppose that either the virus or the organic matter of the quill itself, if introduced beneath the skin into the areolar tissue, may set up an independent, local, septic inflammation, entirely apart from the specific pustulation confined to the skin itself. For the same reason the spring vaccine-lancet, producing a puncture, is a dangerous instrument, unless the depth to which it can penetrate be very carefully limited. Apart from this, I believe experience decides against its efficiency.

But to return to my cases. While awaiting the maturing of this first successful vesicle, I used the German lymph in nine other cases, and tried it a second time in four of the previous cases, thus making in all twenty-seven cases and thirty-one trials. Of the four second trials, —two in unvaccinated children under three years of age, and two in vaccinated adults,—the first two were entirely null and void, the last two developed small unsatisfactory sores, of brief course. Both of these adults had had varioloid many years since. In the mean time, one of the original eighteen, a revaccinated woman about forty-five years of age, appeared with a perfect though small sore. I vaccinated her own child, who had resisted the bovine lymph, with eighth-day lymph from this sore,—the mother being an apparently healthy woman,—but without result. One of the nine new cases, a child four years old, having a good mark from her infantine vaccination, took well. The rest either made very small, imperfect sores, with no constitutional disturbance, or were entirely fruitless. The results of this experiment with virgin lymph may, therefore, be summed up as follows: Twenty-seven individuals were vaccinated; of these, six were primary vaccinations, and twenty-one revaccinations. In all, three were successful, or one in nine,—11 per cent. Of the three successful cases, one was a primary vaccination in a child thirteen years old; the other two were revaccinations. No primary vaccination in a very little child was successful, although in two such a second trial was made. It should be said, however, that of the unvaccinated children one had resisted ordinary humanized lymph nine times, and another twice.

I now proceeded at once to make use of the lymph obtained from the first successful case. With this I vaccinated twelve persons, five of whom I had already attempted with the bovine lymph. The remaining seven, three of which have already been referred to, were all revaccinations; three of the former had never taken. In not one case did this lymph fail to make a decided impression. Two unvaccinated infants, upon whom the juvenal lymph had failed to produce the slightest effect, took perfectly, but not severely; the third unvaccinated case, which had been so often tried, had a mild vaccinella. Two children, of seven and nine years, vaccinated in infancy, and unaffected by bovine lymph, had severe vaccinella. One revaccinated child, as already stated, had a perfect sore. Of the adults, two, already alluded to, had marked vaccinella; two—one a young man of nineteen, vaccinated in infancy, the second a gentleman of upwards of sixty, who had been revaccinated before—had good sores; and two others, also revaccinations for the second or third time, had moderate vaccinella. I now obtained a scab from the third successful case of kine-vaccination,—a child four years old, revaccinated,—considering that a previous vaccination would not impair the virtue of a perfectly well-marked sore. With this I vaccinated five persons, all of whom had been unaffected by the bovine lymph, and all of whom had good marks on their arms. Of these, the mother, aged thirty-eight years, took well; one girl, of seventeen, had a severe vaccinella; one, of seven, a moderate vaccinella; while two, of ten and twelve respectively, were unaffected.

Lymph from a small sore in the second successful case, a woman of about forty-eight, I used unsuccessfully in three cases.

The results, therefore, of the experiment with lymph of the *first remove* (from a primary vaccination, which is the only reliable source, according to most authorities), were as follows: Twelve individuals were attempted,—three primary vaccinations and nine revaccinations. Five were completely successful. Of these, one had resisted bovine lymph, and one both bovine and humanized, and two were revaccinations. The remaining seven all gave evidence of more or less constitutional disturbance, with irregular local manifestations, evidently modified by previous vaccination.

From one of this series I performed the following vaccinations, the virus being now *two removes* from the cow: arm-to-arm-vaccinations, four; quill-vaccinations, seven; crust-vaccinations, eight. Two of the arm-to-arm-vaccinations, in adults previously revaccinated who had resisted the lymph from the heifer, produced decided vaccinella; one, in a child ten years old, vaccinated in infancy, who had resisted bovine lymph, was ineffective; and one, a revaccination of a girl of fifteen, took perfectly. Of the quill-vaccinations, two—one primary, which had twice resisted the juvenal lymph, and one revaccination, which had once been tried with that and once with humanized virus—took perfectly. Three, which had recently been tried with partial success, failed entirely; one, a revaccination at the age of sixty, produced a decided vaccinella; and one failed to report. Of the crust-vaccinations, one, on a woman thirty years of age, inoculated with true smallpox in infancy, in Ireland, produced a sore as perfect as an infant's. Of the remaining seven, three adult revaccinations produced slight, unsatisfactory sores, without constitutional disturbance; two, which had recently had small, imperfect sores, were ineffective; and two on children, both of whom had resisted bovine lymph, and one of whom had recently had an imperfect primary sore, were ineffective. The general result of the use of the virus of the second remove is, therefore, as follows: attempts, nineteen; successes, four; partial effects, six; ineffective, eight; not reported, one.

From the primary case of this series, which was the *third remove* from the heifer, I performed the following vaccinations from arm to arm: one of a young child previously unvaccinated, who had twice resisted bovine lymph; the others, two adults, revaccinations, who had experienced attacks of varioloid and of slight vaccinella from bovine lymph. The first was completely successful; the others null. In the mean time, while awaiting the maturing of my own cases, I was obliged again to have recourse to ordinary humanized lymph, obtaining a small fragment of a crust from one of the physicians to the Pennsylvania Hospital. With this I inoculated four adults, three of them previously vaccinated and having resisted bovine lymph, the fourth having variolous scars upon the face, but unable to account for them. A deep white cicatrix on one arm, although in an unusual place, leads me to think that they were the result of smallpox-inoculation in infancy. All of these cases had vaccinella,—the latter quite severely; but, unfortunately for the reputation of the virus, one of them, although confined to her room for months previously, was seized with varioloid eight weeks after the performance of the operation, and suffered a very severe attack; though it is but just to say that none of the papules became pustular, and comparatively few even vesicular. My supply again failing, I applied to a friend in the country, who promptly sent me a crust from the arm of a "healthy mountain baby." With this I vaccinated eight persons, all of whom had taken the vaccine disease in infancy; one aged six years, one seventeen, and the rest adults. One of these had had varioloid, and had been twice vaccinated. Of these eight, one produced a true sore; two, irregular sores; and five were without result.

To sum up: The record presents the vaccinal history of sixty persons and eighty-eight trials. Virgin lymph was made use of in twenty-seven cases, thirty-one times, with three successes, three slight results, and twenty-five entire failures. Lymph of the first remove from a primary vaccination was employed in twelve cases, with five complete successes, seven decided results, and no complete failures.

Lymph of the first remove from revaccinations was inserted in seven cases, with one success, two decided results, and four complete failures.

Lymph of the second remove, either fresh, on quill, or in crust, was employed in nineteen cases, with four successes, six decided results, eight total failures, and one not heard from.

Lymph of the third remove, direct from the arm, was made use of in three cases, with one success and two failures.

Ordinary humanized virus was employed in sixteen cases, with one success, seven partial results, and eight complete failures.

Taking the cases in the aggregate, we find that the bovine lymph or virus of the early removes (from cases previously unvaccinated), not passing the third from the heifer, was entirely successful in thirteen persons out of thirty-six attempted, with eleven entire failures,—or 36 per cent. of successes, with 30 per cent. of failures; while ordinary virus was entirely successful in one person out of sixteen attempted, with eight entire failures,—or 6 per cent. of successes, with 50 per cent. of failures. It is true that this statement places the ordinary virus at a somewhat unfair disadvantage, from the fact that all the cases on which it was tried were revaccinations, while five of the successes with the other were obtained in unvaccinated persons, one of whom, however, had previously resisted the action of ordinary virus. Making the necessary allowance for these cases, we have thirty-one revaccinations in which virgin or early-remove lymph was used, with nine complete successes (29 per cent.) and ten entire failures (32 per cent.), a result

which is still greatly superior to my own above-recorded experience with ordinary virus, and which I think most observers will acknowledge to be unusually favorable.

I consider that the foregoing statement of simple facts warrants the following deductions:

1. That virgin vaccine lymph direct from the heifer is not easily absorbed into the human system, and that therefore it is not advisable to attempt its general use in the face of an epidemic or the presence of direct contagion.

2. That it is less readily absorbed in the case of infants than of older children and adults.

3. That, when absorbed, it produces the vaccine disease in both its local and constitutional manifestations in its most normal and perfect type, without unusual severity or complication.

4. That virus produced by the inoculation of a single human being with virgin lymph, for the first time, is absorbed into the human system with excessive readiness, constituting the most active virus that can be procured.

5. That such virus is more likely to induce true vaccinia in persons already vaccinated than ordinary humanized virus of long descent, and that it is therefore reasonable to suppose that its prophylactic power is in all cases greater.

6. That what is true of lymph of the first remove is also measurably true of that of several subsequent removes, but to what extent these experiments do not determine.

7. That, accepting the foregoing conclusions, it is a matter of primary importance that every large centre of population should be provided with the means for frequently revivifying its supply of virus by a return to the original source.

SYMPTOMS OF POISONING PRODUCED BY THE INJECTION OF A STRONG SOLUTION OF SULPHATE OF ZINC INTO THE VAGINA.

BY A. K. MINICH, M.D.

MRS. G., aged 28 years, the mother of three children, was in the habit of using a solution of acetate of zinc by injection, for the relief of a leucorrhœa with which she was suffering.

I was summoned one morning in haste to her side, and learned that she had just injected about two drachms of sulphate of zinc in solution into her vagina. Soon afterwards she felt severe pain in the region of the groin, which was followed by sickness at the stomach, and a feeling, as she subsequently described it, "as though her blood could scarcely struggle through her veins." That which first arrested my attention upon seeing her was a deadly pallor of the skin, which was milky in its whiteness. Her features were shrunk, her eyes almost fixed and of a peculiar bright lustre, tongue partially paralyzed, pulse rapid and scarcely distinguishable, at times dicrotic. The whole surface of her body was cold, and covered with a clammy perspiration; her general appearance and condition indicating a profound constitutional depression, and, as it seemed to me, a speedy dissolution. Large quantities of milk were immediately thrown into the vagina, to wash out and neutralize any poison that might still remain; ammonia and brandy were freely administered; sinapisms were applied to her chest, and cloths wrung out of warm water to her extremities. In about half an hour she began to rally, and continued to improve until recovery was complete. The milk drawn from her breast soon after my arrival at once separated into two portions,—a lower thick mass, looking like coagulated milk, and an upper thin and watery portion. Unfortunately, the milk drawn was lost, preventing a closer examination. Her child—a suckling—was removed from the breast until the third day, when it again took it without any untoward symptoms arising.

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

SURGICAL SERVICE OF DR. JOHN H. BRINTON.

Abstract of a Lecture delivered January 17, 1872.

GENTLEMEN,—The first case to which I shall direct your attention this morning is that of a poor fellow who has lost portions of both of his feet from frost-bite, and whose present condition is most unfortunate. His history is as follows. In January, 1870, while travelling on foot in Western Maryland, he was exposed to great cold, and experienced a peculiar burning and throbbing sensation in the soles of both feet. That night he slept in a barn; on the following day he attempted to resume his tramp, but was able to travel but a short distance. That night he slept in the open air, and on the following day found himself unable to walk at all. It was not until the expiration of forty-eight hours more that he received any medical attention, at which time all the toes and the lower parts of both feet were found to be gangrenous. No operative interference was attempted until the month of May, when amputation was performed obliquely through the metatarsus of the right foot, and upon the left foot just in front of the lower tarsal row. The latter operation appears to have been an irregular Lisfranc, or, more properly speaking, an old-fashioned Hey's operation.

Now, if you will examine these extremities carefully, you will find that there is a marked difference in the condition of the respective stumps. The right is in a degree serviceable for locomotion; that is, with the aid of his crutches, he can put so much as remains of the sole of this foot flat upon the ground, and to a certain extent can bring the weight of his body upon it. This he cannot do with the left stump, which is tender, painful, and excoriated over the line of the cicatrix. The left heel is elevated; he cannot flex the ankle-joint; he walks with this stump in extension, its extremity resting on the ground, and the weight of the body pressing upon and irritating the tender cicatrix.

What is the explanation of the difference as to the condition of these two stumps? The answer is found, I think, in the differing anatomical relations of the parts. You will understand this fully if you will reflect for a moment upon the disposition of the muscles which pass from the leg to the foot. *Flexion* of the tarsus upon the leg is effected by the direct action of the tibialis anticus and peroneus tertius muscles, assisted perhaps by a continued contraction of the extensor longus digitorum and extensor pollicis proprius. *Extension* of the foot is produced chiefly by the powerful muscles of the calf acting through the medium of the tendo Achillis, and aided by the tibialis posticus and peroneus longus and brevis. Now, in the right foot of this patient the insertions of the tibialis anticus and peroneus tertius have not been interfered with; these muscles still retain their power to flex the foot and to exert a proper antagonism to the calf-muscles. On the patient's left foot, however, their insertions have been divided, and the foot is left at the mercy of the powerful posterior extensor group; the heel consequently goes up, and the extremity of the stump comes down. As a result we have the tender, painful stump so harassing to the patient.

Is there any remedy for this condition, short of reamputation? A partial, if not a perfect one, I think there is; and that is to be found in the free division of the tendo Achillis, with forced depression of the heel, and its retention in that position until an elongated union of the divided tendon shall have taken place. I now make the subcutaneous section with my narrow tenotome, dividing freely all the adhesions of the tissues. I then attempt to bring down the heel, and in so doing I am but partially successful, owing to the resistance of the adhesions, which rise to my finger as I continue the flexion. I cut them also, and you see now that the heel comes down, and that the sole of the foot is flat. The interspace between the divided ends of the tendon is considerably more than an inch. I shall now apply a broad strip of adhesive plaster firmly, so as to retain the heel in its new and really normal position, and shall keep the patient in bed for a few days.

I have directed your attention, gentlemen, to this case, not only that you might see what may result from frost-bite, but also more generally with reference to amputations of the anterior part of the foot. The most common of these—those in fact which may be regarded as very tempting to the surgeon, because of the high degree of skill required for their performance—are spoken of as Lisfranc's and Chopart's amputations. The former is, as you know, a disarticulation of the foot at the tarso-metatarsal articulation; the latter is through the middle of the tarsus, the calcis and astragalus forming the stump. In Chopart's amputation the tendons of the extensor muscles are divided above their insertion; there is consequently no antagonism to the posterior forces exerted through the medium of the tendo Achillis. Hence in these cases the heel is almost invariably elevated, and the sensitive cicatrix brought to the ground. In Lisfranc's amputation the internal cuneiform bone is left, and with it a portion of the insertion of the tibialis anticus muscle; but that other portion which is attached to the metatarsal bone of the great toe is severed. The peroneus tertius tendon, inserted upon the metatarsal bone of the little toe, is also cut. The same results, therefore, so markedly observable in Chopart's amputation, are often present, although perhaps in a less decided degree, in the tarso-metatarsal disarticulation. I speak in this matter quite positively, for I have had frequent opportunities of examining the stumps of such operations, and I am very certain that they are often accompanied by great inconvenience and suffering upon the part of the patient. The condition of affairs I have described is generally of slow development; it is not always present, or, at all events, does not attract attention immediately after the operation, but makes its appearance gradually. As far as my experience goes, the elevation of the heel is usually complete in from twelve to eighteen months after cicatrization, when the patient finds that the stumps are practically useless.

You will ask me, I know, whether in view of these facts I would advise the non-performance of these disarticulations. To this I would answer, Not in all cases; but in performing Lisfranc's amputation I would strongly impress upon your minds the advisability of so modifying your procedure as to preserve, if possible, the bases of the metatarsal bones of the first and fifth toes, with their insertions of the anterior flexors of the foot. If this cannot be done, then it would seem to me to be good surgery to divide the tendo Achillis, either at the time of amputation or later, as soon as any tendency to elevation of the heel may become evident. The propriety of Chopart's amputation appears to me to be very questionable; indeed, with the knowledge we now possess of the results of Syme's and Pirogoff's methods, through the ankle, I should prefer to operate by one or other of the last-named procedures.

ISCHIO-RECTAL ABSCESS—EXTENSIVE DENUDATION OF THE RECTUM.

The next case which I will bring before you is of great interest, and is one which will demand the utmost care and attention to bring to a successful issue. This is the patient's history: H. P., aged 23, was admitted into hospital about three weeks since. He had been employed in a sales-stable, and his occupation was to ride the horses for trial. Eight years ago, when employed in a glass-factory, he sat down on a hot bottle, and thus burnt and cut his buttock extensively. You see now the scars of this injury. A short time before his admission to this hospital he suffered great pain in the rectal region, and found himself unable to ride; an abscess formed and burst on the left side and below the anus. The resulting external openings I enlarged and slit up as soon as the patient came under my treatment. Very considerable discharge has taken place, but there appears to me to be a tendency of the sinuses to burrow; there certainly is an indisposition of the parts to heal. I am under the impression that very serious trouble exists around the rectum, and I propose, therefore, further investigation.

The patient's rectum has been freely emptied by an enema. He is now etherized, and I will examine carefully into his condition by means of my probe. Observe, if you please, the nature of this instrument,—an ordinary silver probe some five inches long, with a broad flat handle, and with an eye through the bulbous end. In making rectal examinations you will find great advantage in having a flat handle to the instrument;

you are enabled to direct the point whither you will, and always with absolute certainty as to its whereabouts. Sir Benjamin Brodie, in his clinical teachings, laid great stress on this matter, and I advise you always to employ probes of this construction. Now, as to the introduction of the instrument: notice that I carry its point through the external opening on the left side of the buttock, before I introduce my index-finger into the rectum. I do this in order that the probe may follow the natural course of the sinus. If I were to insert my finger into the rectum first, I should excite contraction of its sphincters and of the levator muscle, and the track of the sinus might thus be rendered more tortuous and difficult of exploration. This probe now passes freely up by the side of the bowel. Is there an internal opening to this sinus? To determine that, I now insert my index-finger, well oiled, through the anus, and search carefully. Here again it is well to remember a precept of Sir Benjamin's,—viz.: that when an internal opening exists—in other words, when the fistula is complete—this opening will most generally be found not far from the anus; in fact, in that portion of the mucous membrane included between the upper and the lower sphincter. Surgeons often err in searching for the opening too high up,—too far away from the anus. Do not commit this mistake. Remember that in most instances the internal orifice will be found in the locality I have indicated. The opening, when it exists, is usually through the centre of a small protuberant caruncle or elevation in the mucous membrane, which in most cases can be readily recognized by an experienced finger. Once detected, a little gentle manipulation with the handle of the probe will cause its point to emerge in the cavity of the gut. In the case before us I have now carefully explored the mucous membrane for some distance above the external sphincter, and I find no evidence of an internal opening; indeed, I scarcely expected, from the history of the patient, that one would exist. But I do find, however, by turning my probe from side to side, that extensive ravages have occurred in the tissues surrounding the rectum externally, for I can sweep the point of the instrument in every direction. I now withdraw my probe, and enter it through the external opening on the right side of the anus, and you see that the point of the instrument passes up as freely upon this side as it did upon the other, and that the sinuses are continuous. I think we may take it for granted that the rectum has been denuded throughout its entire circumference, and this denudation extends upwards from two and a half to three inches. I would here draw your attention to the character of the integuments under our observation. Notice the purplish shining hue; and if you could feel them, as I do now, they would give to your finger a sense of brawny boggy resistance. The whole of this tissue is worthless, and serves but to cover and conceal the extensive devastation of the structures beneath.

I have thus briefly exposed to you the present condition of the parts. Now, what has brought this about? Undoubtedly, the formation of an abscess in the fossa between the rectum and the ischium, which has gradually extended, destroying the opposing tissues, depressing the vitality of the integuments, and stripping the rectum of its external surroundings. As far as I can learn, the walls of the gut are not penetrated, its muscular and mucous coats being intact.

Such, gentlemen, I believe to be the lesion and its mode of development. The next question, and to our poor patient the most important, is, Can this condition be relieved? can the parts recover their normal healthy state? I think they can, provided a proper operative treatment be instituted. My object will be to lay open the existing sinuses, and to endeavor to obtain granulation from the very bottom of the tracts. At the same time I must bear in mind that the chain of sinuses sweeps completely around the rectum, and should I divide all of the superjacent tissues at once, disastrous consequences might ensue. In all probability the external sphincter would be cut at two points, anterior and posterior to the anus; and possibly also some portions of the levatores ani might be involved. More or less incontinence either of flatus or fæces, or of both, might result,—a condition which I have more than once seen, and one which is very distressing to the patient. This is a matter which does not always receive from surgeons the attention it deserves; and I would therefore here caution you, gentlemen, against cutting the sphincter at two points in

the same operation. If you do this, the power of the muscle is lost, and, as a result, the power to control the motions. Let me warn you, therefore, never to divide with the knife the sphincter in more than one point at the same operation, nor in successive operations at short intervals of time. Indeed, I would even go further, and say that if ever a second operation for fistula be necessary on the same patient, it had best be accomplished by the seton.

In the patient upon the table I shall operate at intervals. To-day I shall lay open the sinus on the left side, slitting up, as you see me now do, all of the tissues as far forward as the middle perineal line in front of the anus. The hemorrhage is inconsiderable. Through this transverse sinus, between the right and left main tracts, I shall pass a seton. This latter, from the depth at which it is placed, will probably in sloughing out divide the anterior attachment of the external sphincter,—a circumstance which I regret, but cannot prevent. By now introducing my finger through the cuts I have made, I find that I can carry it up, sweeping the circumference of the rectum to a very considerable depth, thus verifying the information already furnished by my probe.

The after-treatment of the case will be simple, and will consist in light packing of the wound, perfect cleanliness, two or three days' enforced rest of the bowel, and the very best supporting and tonic regimen the house can command.

This patient will be brought before you from time to time, so that you can observe his progress and after-treatment. The operation upon the opposite side of the perineum I shall defer, in accordance with the principles I have laid down, until reparation of the tissues already divided shall have taken place. By so doing, I trust to conduct to a successful termination the treatment of this exceedingly grave affection.

TUBERCLE-CELLS IDENTICAL WITH WHITE BLOOD-CORPUSCLES.—Dr. C. F. Rodenstein, in a communication read before the Yonkers Medical Society (*New York Medical Journal*, December), maintains the identity of the white blood-corpuscles with tubercle-cells, and that tubercles are caused by an extravasation of the white corpuscles of the blood,—an opinion which was originally announced by William Addison in 1843, and more recently by Waldenburg. He says it is impossible by the microscopic appearances to distinguish separate tubercular cells, such as we see scattered over the pia mater, from white blood-corpuscles, and quotes Virchow's description of a tubercular cell as evidence in favor of this identity. The locality in which tubercles are found also favors the presumption that they are derived from the blood; for they are generally developed along the course of the vessels. He says, further, that although pus and tubercular cells are identical in healthy blood, and are transuded in inflammation, it is as improper to say that tubercles are only a collection of pus as it is to say that a leucæmic or typhous tumor, or a glioma, is a collection of pus, notwithstanding that each is made up of the round migratory cells. There is a pathological cause which in the one instance makes a white blood-corpuscle a pus-cell, and in another a tubercular cell.

PARALYSIS AS THE RESULT OF ALCOHOLIC EXCESS.—Dr. C. Handfield Jones reports, in the December number of *The Practitioner*, several cases of spinal paralysis produced by alcoholic excess. In some of the cases pains of a rheumatic character, but unaccompanied by swelling, preceded the loss of power, so as to give rise to the impression that the patients were suffering from rheumatism. In one case, in which a post-mortem examination of the spinal cord was made by Dr. Lockhart Clarke, extensive alterations were found. The prominence of the spinal symptoms in the cases reported by Dr. Jones he explains by supposing that the alcohol affected the lower spinal centres more than the cerebral. That a drug which usually acts on one locality may occasionally leave that part unaffected and concentrate its action on another is proved by the similar case of opium, which sometimes passes by the hemispheres and paralyzes the cardiac nerve-centres. Dr. Jones also refers to the fact that epileptic seizures are a frequent consequence of chronic alcoholism.

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EDITORIAL.

THE SALE OF DIPLOMAS.

THE committee appointed by the Legislature to investigate the matter of the alleged sale of collegiate degrees by the Philadelphia University of Medicine and Surgery and by the American University of Philadelphia met again in this city on Saturday, February 17, and examined several additional witnesses. The evidence went to show that degrees had been sold by the American University, and was so clear and ample that we think that the Legislature will be wholly derelict to the duty it owes the people of this State if it do not, before the close of the present session, revoke the charter of this institution, which appears to have grown very bold of late, and to have scattered its diplomas about with a degree of recklessness which is really surprising. It was proved, during the investigation, that in many cases twenty-five dollars was all that was demanded for conferring the doctorate upon any person, whether qualified or not, who desired it. The recipient of one of these diplomas testified that he had never attended a course of lectures, either at the American University or elsewhere.

It is evident that the members of the faculty of the Philadelphia University have been more wary; but we think that there will be little difficulty of convicting them of the same misdemeanor, although two of them swore that they knew nothing of the sale of diplomas. Dr. Paine, the dean of the institution, was foolish enough to attempt to carry the war into the enemy's camp, by asserting that diplomas were sold by the University of Pennsylvania. Of course this statement will be regarded, by all who are acquainted with the high character of the gentlemen who compose the medical faculty and the Board of Trustees of the oldest medical school in this country, as an impudent falsehood and slander, for which its author should be held responsible. While under oath, Dr. Paine stated that "in 1869 a gentleman had called on witness with eighty blank diplomas of the University of Pennsylvania which he wanted to dispose of, saying that money could be made out of them. This gentleman's uncle was a Professor in the University, and he (Dr. Paine) supposed the diplomas were obtained through him." Dr. Rogers, the dean of the medical faculty of the University of Pennsylvania, denied this assertion most emphatically, and

called Mr. Horace W. Smith, a descendant of the Rev. William Smith, a former Provost of the University, who testified as follows:

"I had an offer to sell diplomas which had on their face an engraving of the Pennsylvania Hospital; I obtained these diplomas from Cephas D. Childs; I disposed of them to parties illustrating the city of Philadelphia, for thirty cents each; I cut off all the engraved matter by direction of Mr. Childs, the engraver; I mentioned to Mr. Paine that I had access to a number, and told him the price; he did not offer to buy, but the next day a man came to me and offered for good copies three dollars each; I did not sell them."

We have quoted the testimony given above, verbatim, from *The Philadelphia Inquirer*. We believe, however, that the diplomas which Mr. Smith had in his possession were certificates of attendance upon the course of clinical instruction of the Philadelphia Hospital before its removal to the west side of Schuylkill River, and not of the Pennsylvania Hospital, as stated in the report. As this appears to be all the authority Dr. Paine had for what he said on this point, our readers will know what importance to attach to the remainder of his testimony. We repeat that Dr. Paine will not succeed in injuring the University of Pennsylvania among its friends; but he has no doubt accomplished his object, which was to produce an impression among a portion of the community that the present investigation is instigated by jealousy.

The secular press seems to be at last aroused to the necessity of suppressing these diploma-manufactories; and it is to be hoped that it will communicate some of its zeal to our legislators at Harrisburg, for the continuance of this evil will imperil the reputation which Philadelphia justly bears as a centre of medical education.

COMPULSORY VACCINATION.

THE Board of Health of this city has presented a memorial to the Legislature of Pennsylvania, praying that authority might be granted to it to enforce vaccination. This action has of course given rise to much discussion in the daily newspapers, and some little misapprehension evidently exists as to what it is intended to accomplish by it. A correspondent of *The Press* says that two leading physicians of the city have declined to vaccinate him, and that he knows of a gentleman whose life was placed in great peril in consequence of erysipelas ensuing upon the operation. The gentleman to whom he alludes, undoubtedly, was very ill after he had been vaccinated, but, from what we have heard of the case, we are inclined to believe that his friend has made the not unusual mistake of taking a *post hoc* for a *propter hoc*. Of course, if the Legislature passes any statute making vaccination obligatory,—and we sincerely hope it will do so,—physicians will not be compelled to perform the operation in cases in which, by reason of ill health or advanced age, it might be attended with danger.

THE PHOTOGRAPHIC REVIEW OF MEDICINE AND SURGERY.

IT gives us pleasure to call the attention of our subscribers to this excellent journal, which is also published by Messrs. J. B. Lippincott & Co., and which completed its first volume last August. A number is issued bi-monthly, and contains four photographic representations of medical and surgical diseases, which upon comparison we find to be much more artistically executed than those contained in the French *Photographic Review*. The *Review* is ably edited by Drs. F. F. Maury and L. A. Duhring. The subscription-price is six dollars per year.

LEADING ARTICLES.

A SUIT FOR MALPRACTICE.

BY P. W. ELLSWORTH, M.D.

A CASE has just been tried before the Superior Court of Connecticut, of great interest both to the profession and to the public, it being the first of the kind for many years in that State.

Eight years ago—viz., in 1864—a Mr. White was thrown with great violence from a vehicle, the horses running at the time and dashing the carriage against a tree. He fell upon his feet, fracturing obliquely both bones of the left leg one and a half inches above the ankle-joint. Dr. J. C. Jackson, passing at the time, was called upon, and reduced the fracture, with the assistance of Dr. A. W. Barrows, who administered chloroform. On final recovery there was found a misshapen leg, it being bent outward at the point of injury one-fourth of an inch. After a delay of six years, suits were simultaneously commenced by Dr. Jackson for his bill and by Mr. White for malpractice; the latter laying his damages at \$10,000. The doctor recovered \$100 for his services, and the trial of the second suit is just finished.

The plaintiff summoned several medical gentlemen, particularly Dr. D. Smith, of Springfield, Mass., Dr. Jewett, of New Haven, and Dr. Curtiss, of Hartford. The testimony of the prosecution went to show that the fracture-box is worthless; that when it was found chloroform could not be given without danger, some other anæsthetic should have been used subsequently for the purpose of correcting the deformity; that stronger extension than had been used was demanded; that callus never bends when hardened, and that it never softens and afterwards again hardens; that the swollen and painful condition of the ankle-joint and foot did not interfere with extension, and that extension is a first-rate thing for a diseased joint; and that the side-splint at last applied was useless. The testimony of Drs. Jewett and Curtiss was, however, very guarded, and did not materially strengthen the case of the plaintiff; nor was it very adverse to the testimony for the defence.

Many of the physicians and surgeons of Hartford

were called upon to rebut these views, and with them Dr. F. Bacon, Professor of Surgery in Yale College.

It was maintained—1. That the evidence was conclusive as to the primary correct setting of the bone, as both Drs. Jackson and Barrows were experienced and thoroughly competent men; while Dr. Barrows, who asserted that the fracture had been properly reduced, was a most reliable and disinterested observer.

2. That the fracture-box is in very general use, especially for bad oblique and compound fractures of the leg; is very commonly employed in hospitals, especially in Hartford, and by many surgeons in private practice; and is an instrument, if properly managed, capable of producing the best results.

3. That when Dr. Jackson proposed to rectify the limb about the tenth day, plaintiff refused to have it done, except upon terms endangering his life. Therefore defendant could not be responsible for consequences.

4. That extension was not demanded, and therefore not used, further than laying the leg over an inclined plane of pillows and the box; that the shortening, being only three-eighths of an inch, and detected by no roughness indicating overriding of the fragments, did not justify traction upon the injured foot.

5. That callus often yields if not fully consolidated, and union cannot be positively assured at a given time; and that the union might appear firm, yet yield upon too violent use of a limb even after dismissal by the surgeon; that this yielding might be gradual, and at first imperceptible to a careless observer.

6. That as chloroform had, as testified by Dr. Barrows, produced on its first administration very dangerous symptoms, the surgeons were justified in using their best judgment as to the further employment of anæsthetics.

7. That, the deviation of the natural outward bend of the lower part of the tibia being increased only one-fourth of an inch, the lameness could not be very great. This was further proved by plaintiff's having danced all night, and having a gait showing the most trifling lameness.

8. That, plaintiff having left Dr. Jackson before dismissal, defendant was not responsible.

The arguments based upon the evidence were masterly, especially those made by the defence, conducted by Wm. W. Eaton and N. Shipman. The argument of Mr. Shipman was legally elaborate, and that of Mr. Eaton most eloquent and convincing.

The charge of Judge Pardee could hardly have been improved upon, and was very gratifying to the many professional men who heard it,—being concise, exactly to the point, and eminently just. After summing up the case, the judge closed as follows:

"The law demands of every man who offers his services to the public as a physician and surgeon, that he should have that degree of learning and skill in his profession which is ordinarily possessed by those members of the same profession who are well educated in it; having reference to the state of medical and surgical skill and science at the time of the service rendered. This rule does not require that he should have the highest skill to which men of rare genius and endow-

ments attain, or an education equal to the most eminent of the profession in the country; and it will not allow any man who is uneducated and unfitted for the work to represent himself as qualified to perform surgical operations or administer medicines.

"Again, a physician or surgeon well qualified under this rule may yet expose himself to an action for damages, by reason of his neglect to bring into exercise his learning and skill in a particular case; for, when he takes professional charge of a patient, the law makes it a part of the contract that he will yield to the use and service of such patient his best knowledge, skill, and judgment in investigating the nature of the injury or disease, and the best mode of treating it, and that no injury shall come to him by reason of the carelessness or negligence of the attending physician or surgeon.

"Again, the most skilful of the profession may mistake the nature of the injury or disease, apply improper treatment and be unsuccessful in the work of restoration of a fractured limb or cure of a diseased organ, and yet not be responsible in damages; and the law does not make any physician or surgeon an insurer or guarantor of success, unless by special contract; and he is not held responsible for failure in his treatment of a particular case, unless that failure has resulted from his want of ordinary care, skill, and diligence, or from his negligence and carelessness in the management of the case; the burthen of proving all which is cast upon the person who institutes a suit for malpractice. If the patient, by his own negligence, or by his disobedience of the proper and reasonable instructions of a well-qualified physician or surgeon, contributes essentially to the failure of success in his own case, he can hold no one responsible therefor."

The case was tried before eleven jurors, by consent of the parties; ten of these were for defendant and one for plaintiff. After being sent out three times by the judge, an agreement was reached by way of compromise: the verdict being five dollars damages to plaintiff and five dollars costs,—a verdict virtually for defendant.

The writer would add that, whether the increased curvature of the limb of plaintiff did or did not result from use prior to removal of all splints, or immediately thereafter, he feels assured from many observations that there is a high probability that a very large proportion of deformities which follow fractures treated by competent men are caused by imperfect callus. Several cases are known to him where limbs left by surgeons after careful inspection have presented appearances, months after, utterly unaccountable except on this supposition. As the process of consolidation goes on slowly from a state of fluidity to that of solid bone, and as the time of cure depends not less on the constitution and quietness of the patient than on the skill of the surgeon, it is by no means surprising that the reparative process may be unexpectedly delayed, and the callus, though examined carefully, should have less earthy matter deposited in it than was supposed. In proof of this, the writer would state a case exactly in point. A very competent surgeon reduced a fractured radius and ulna a year and a half ago. The patient, finding the arm pretty strong, left the surgeon (without his consent), and went to work. When he left, the arm was as perfect as before the fracture, and eight weeks had elapsed. The patient

now threatens suit, owing to a deformity. A surgeon who examined the wrist recently states that there is even now motion at the point of fracture. Unquestionably the whole trouble has resulted from bending of the softened callus. The profession is requested to examine into this condition of renewing bone, as it will put it on guard both against the danger to the patient and that of suits against its members.

CORRESPONDENCE.

LONDON, 22d January, 1872.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

DEAR SIR,—Having spent the past month in London, and during that time having been quite a constant attendant upon the practice of the Royal London Ophthalmic Hospital, Moorfields, and knowing from a continued perusal of our medical journals for the past ten years that little or nothing has ever been published concerning the practice of the hospital, save in the more formal character of official Hospital Reports, I propose to give off-hand brief sketches of my impressions of the surgeons and the surgery of the "Old Moorfields," as it is familiarly and fondly called here. And it well deserves all the encomiums that may be lavished upon it. From some personal experience of the working of an ophthalmic hospital, I am able to speak with somewhat of confidence as to the justness of my observations.

The hospital in Bloomfield Street, founded in the year 1804 by John Cunningham Saunders, is in the midst of a poor, thickly-settled district of the "city," and is not easily found by a stranger. Londoners themselves do not pretend to know exactly where Moorfields is; so that it is better to ask for the hospital in Bloomfield Street. That this caution is not superfluous, the stranger who seeks it for the first time will have due reason to appreciate.

With the exception of Mr. Jonathan Hutchinson, the surgeons all live at a distance of two or three miles, in the west end of the city. Externally there is no pretence to architectural merit. The exterior is of dark brick, much stained by London smoke, presenting a sombre appearance. Its front windows look out upon the busy scene of a large metropolitan railway terminus. Internally the walls are painted of a delicate bird-egg-color (the green hue predominating), while the stair- and ward-walls have painted surbases of a dark color, running up to a sufficient height to prevent soiling by the patients.

Within a few years the hospital has been enlarged by a new wing, and every available foot of ground has been built upon; even the yard was occupied, it being floored over, and a glass roof thrown across it, to give increased facilities to the surgeons.

There are only sixty beds in the hospital; these are divided among the seven surgeons. But it is the out-practice that is so important, as it is with us at the Wills Hospital in Philadelphia. This is the great feeder to the house, and in 1870 the number of new patients attending was 18,660, with a total attendance of out-patients of 93,300. I was assured by the surgeons that three hundred a day was about the average attendance of the out-patients. The system of registration is different from ours. The name, diagnosis, and treatment are not entered in a book as with us, but the patient has what is called "a letter," on which are his name, diagnosis, and treatment. The patient keeps this, and at each visit presents it to

the surgeon, who writes in it such remarks or directions for treatment as may occur to him from time to time. Medicines and spectacles are both furnished by the house. The furnishing of spectacles, it is thought by some of the surgeons, might be done away with with advantage. Each of the surgeons attends twice a week. The hours for seeing patients are from eight to ten o'clock in the morning; but the surgeons rarely get there before nine o'clock, and they remain until about one o'clock, according to the amount of business on hand.

The following are the days of attendance and the names of the surgeons: Monday and Thursday, Mr. Streatfield, Mr. Hutchinson; Tuesday and Friday, Messrs. Bowman, Critchett, Lawson, Couper, Soelberg Wells; Wednesday and Saturday, Mr. Wordsworth, Mr. Hulke.

The out-patients begin to arrive at eight o'clock, and are gathered in a large receiving-room with divisions for each sex. From this they are drafted by the hospital-porter into a spacious prescribing-room, where the surgeons sit at high desks, each one having a sort of railed alley-way along which his particular batch of patients approaches him. A limited number only are allowed at a time, and this prevents the noise and confusion inseparable from such a mass of waiting people, especially as many young children and infants are certain to be in the assemblage. Mr. Bowman's out-patients are seen by Mr. Wells; Mr. Couper does the same for Mr. Critchett.

Eleven o'clock is the daily hour for operation. Hardly a day passes without an operation. There are no formal consultations held, but each surgeon, accompanied by the house surgeon, goes up-stairs to the operating-room and proceeds with the matter in hand. The operating-theatre is up-stairs; it is small and poorly adapted to its purpose, being very defective as to light, especially important in this country of mist and fog.

The operating-table is placed with its foot opposite to a large window, so as to let the light fall upon the patient's face. On each side are a series of steps or platforms; each is separated from the other by a light iron railing; and in these tiers the students or lookers-on stand. There are no seats, as there are with us. This appeared to me to be an improvement, as it brings the students nearer to the operating-table, and the regular graduated rise of the platforms enables one row to look over the heads of the other. Anæsthetics may be said to be always used here; bichloride of methylene is the favorite, and, from what I have seen of its use in this and in other London hospitals, I have been much pleased with it. About a drachm is poured upon a cup-shaped inhaler (made of pasteboard and flannel). It appears as effectual and rapid in its effects as chloroform, and less apt to produce vomiting. With the exception of Messrs. Bowman and Critchett, the majority of the surgeons hold appointments also in general hospitals, one holding no less than four other appointments. It seems wonderful how, with such other engagements, they can devote so much time to this special work.

I saw but little that was novel to me. The out-practice was composed of an endless repetition of such cases as fill the out-patients' rooms of ophthalmic hospitals in America, and the remedies were such as we use at home,—calomel insufflation, nitrate-of-silver drops, tonics, and attention to the general health, being the staple remedies. Specific disease, however, appeared to be more rife; in fact, London is not far behind Vienna in this respect. The two greatest novelties that came under my notice were Mr. Critchett's new mode of operating

for cataract-extraction, and Mr. Bowman's method of trephining the cornea for creeping intractable ulcer (*ulcus serpens* of Sämisch) of the cornea. Mr. Critchett's method is with a narrow Graefe's knife to make an upper section of the cornea, midway between the upper border of the pupil and the superior corneo-sclerotic junction. The anterior capsule is then lacerated, no iridectomy is performed, and the lens is delivered by pressure with the finger or a curette from below. He thinks that the pressure of the upper lid has a tendency to coapt the edges of the wound, whereas in the Graefian wound the pressure of the upper lid has a lever-like influence upon the corneal flap. He showed a case that had been operated upon a few weeks before, in which there was a good circular pupil, with a slight film of capsule remaining, which he broke through with a needle. In speaking of iritis after extraction, he remarked that he thought the rheumatic and suppurative diatheses were antagonistic. He attached so much importance to this fact that he would do a flap operation on one eye, and "a slit," as he familiarly called it, on the other. Also, that though one would think that a slit was not so favorable to extraction of the lens, in practice it was found to be so. I saw several other cases of good circular pupils after this operation in Mr. Critchett's wards.

I saw Mr. Liebreich do an operation entirely similar, save that he made his section in the lower segment of the cornea. He also showed me two patients who after the lapse of some weeks presented perfectly round pupils; in one the line of incision was only to be seen by oblique illumination. Really the operations are the same, except as to the location of the wound. Mr. Liebreich publishes an account of his operation in the *Medical Times and Gazette* for December 2, 1871.

Mr. Critchett is about to publish his experience with the new operation in the *London Medical Press and Circular*, edited by Dr. Prosser James.

Mr. Bowman's new operation consisted in drilling or trephining a hole in the sclerotic border of the cornea, in a case of serpiginous ulcer of the cornea threatening to girdle the cornea and destroy its nutrition. He had tried to check it by every means, including iridectomy, without avail. By means of a little instrument very like a minute trephine, he bored a circular opening at the sclerotic junction of the cornea over the site of the previous iridectomy (having no iris under his wound), and allowed the aqueous humor to flow off. His object was to relieve tension; and to do so continuously for a short time he allowed the wound to heal slowly by granulation, opening it from time to time.

A. D. HALL, M.D.,

Surgeon to Wills Ophthalmic Hospital, Philadelphia.

(To be continued.)

THAT NEW DEPARTURE IN MATHEMATICS.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

DEAR SIR,—I did not happen to see Dr. Ashhurst's reply to my notice of his criticism for some time after its publication; nor did I then regard a reply on my part as necessary. Several interested friends, however, desired the opinion of an expert; and accordingly the papers were all sent to E. B. ELLIOTT, ESQ., of Washington, well known as an authority in statistical and mathematical investigations. Mr.

Elliott was at the time absent in the West; on his return he sent the following statement:

"The question at issue, as you state in your note, is, 'If ankle-joint and leg amputations in two armies give percentages of mortality as follows (per 100 cases of each amputated): *first*, ankle-joint 13 per cent., leg 26 per cent.; *second*, ankle-joint 18 per cent., leg 36 per cent.,—is it *arithmetically* correct to state, 'From these statistics it appears that amputation at the ankle-joint is 50 per cent. less fatal than amputation of the leg'? My reply is in the affirmative. These statistics indicate that ankle-joint amputations are less fatal by 50 per cent. than leg amputations; that the proportionate mortality resulting from the former is less by 50 per cent. than that resulting from the latter; the mortality resulting from the latter being impliedly the unit or basis of the comparison.

"We may invert the order of statement, and say, correctly, that from these statistics it appears that leg amputations are 100 per cent. more fatal than ankle-joint amputations,—the difference in the two rates of mortality being clearly equal to 100 per cent. of the rate resulting from such ankle-joint amputations. The difference between the two rates of mortality under consideration is 18 per cent. of the number of cases operated upon; 50 per cent. of the proportionate number of deaths occurring when the amputations are through the leg, and 100 per cent. of the proportionate number of deaths occurring when the amputations are at the ankle-joint.

"I regard each of these forms of statement as correct.

"The subject might be further illustrated as follows: Assume that ankle-joint amputations were fatal in 21 per cent., and leg amputations in 28 per cent., of the cases operated upon; the difference in favor of the amputations at the ankle-joint would obviously be 7 per cent. of the number of cases operated upon,—a quantity equivalent to $33\frac{1}{3}$ per cent. of the mortality which resulted from amputation at the ankle-joint, or 25 per cent. of that which would result from amputations through the leg.

"It would, then, in my opinion, be proper to state that these data indicate that amputation at the ankle-joint is less fatal by 25 per cent. than the alternative amputation through the leg; also, that amputation through the leg is $33\frac{1}{3}$ per cent. more fatal than amputation at the ankle-joint; also, that the difference in favor of amputation at the ankle-joint, as compared with amputation through the leg, is equivalent to 7 per cent. of the entire number of cases operated upon.

"The subject does not seem to me a difficult one. Your reviewer demands, as I understand, that you make the entire number of amputations the basis upon which to compute your percentage. You are of opinion, I take it, that you have a right to make some other quantity the basis, as, for instance, that which represents the mortality which results from amputation through the leg. He would subject you to greater restriction in the selection of the basis on which your percentage may be computed, than you deem necessary or desirable. My opinion is in favor of the larger liberty in the selection of such basis.

"The question asked is, What per cent. is 18 per cent. of 36 per cent.? Your reply is correct,—viz., 50 per cent. The question which your reviewer would have you ask is, What is the difference between 18 per cent. and 36 per cent.? The answer obviously is 18 per cent. You do right in objecting to this form of putting the question, because it fails to institute the precise comparison you evidently design to make. You

do not wish to institute a comparison between the saving of life and the number of cases operated upon, but between such saving and the mortality resulting from an amputation which furnished the larger death-rate."

I am happy to have furnished Dr. Otis an opportunity to read Cooper's case in full. I made no allusion to Richards' and Claggett's case as one of amputation for gunshot. He thinks "Surgical statisticians would hardly have acquitted" him if he had omitted "from a table designed to show the mortality of amputations at the hip-joint after gunshot wounds" a case in which the patient died before the amputation was performed. I am of the opinion that surgical statisticians will regard such tabulation as censurable. Cooper's case made a difference in the death-rate of six-tenths of one per cent. What would have been the difference if 161 cases similar to Cooper's had been added?

Yours, etc.,

STEPHEN SMITH.

NEW YORK, February 12, 1872.

[This correspondence must end here, so far as the columns of the *Times* are concerned. We think it but right to add that a reference to Dr. Ashhurst's letter, in the number for December 15, 1871, shows that he has not denied, but has, on the contrary, expressly affirmed, that 18 per cent. is half of, or 50 per cent. of, 36 per cent.; and that it is less than 36 per cent. by 50 per cent., which is equivalent to saying, as Mr. Elliott does, that 18 per cent. is 50 per cent. less than 36 per cent., *36 per cent. being assumed as the unit or basis of comparison*. It is, moreover, our opinion that Dr. Smith, having himself adopted as his basis of comparison the whole number of cases, or 100 per cent. (which he does by saying that 9 per cent. is 3 per cent. less than 12 per cent.), is inconsistent in changing his unit during the same statistical investigation, by saying that 18 per cent. is 50 per cent. less than 36 per cent.

It is, in our opinion, begging the question to say that Dr. Otis inserts in his table "a case in which the patient died before the amputation was performed," for this is the point at issue; the fact being that the patient died, not before the operation was *performed*, but before it was *completed*.—ED.]

SAN FRANCISCO, CAL., January 16, 1872.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

DEAR SIR,—An article on Styptic Cotton appears in your journal of January 1, 1872, by James Cummiskey, in which he recommends dipping the cotton in sol. persulph. ferri. I would respectfully state that at the outbreak of the rebellion, in 1861, I conceived this idea of making a styptic for the benefit of wounded soldiers, and consequently made large quantities, which kept very well for about six weeks; but I soon found a change taking place in its nature, the preparation losing entirely its styptic properties. Mine was made into rolls about two inches long by three-quarters of an inch thick, and wrapped in oiled silk to protect it from the air; but, notwithstanding this precaution, it would swell up and burst the wrapper and lose its virtues.

I would like to know from Dr. Cummiskey how he manages to prevent the same result with his preparation. Perhaps there is something in dipping the cotton in a solution of soda previous to saturating it with solution of subsulphate of iron, which I did not do.

Yours, truly,

H. JOHNSON,
Captain, etc., U.S.A.

OBITUARY.

DR. JAMES S. CARPENTER.—This gentleman, whose recent death, after an active and honorable professional career, has been referred to in the public press, established a reputation as a worthy, industrious, and skilled practitioner during a period of nearly half a century. Born in New Jersey, he removed a few years after graduation to this State, and in 1829 made Pottsville his home, in which place he continued to reside until his death. He was one of the most honored alumni of the University of Pennsylvania, from whose halls he at once passed into active practice; afterwards visiting Europe for purposes of professional improvement, when Dupuytren, Velpeau, Liston, Cooper, and Brodie were the leading lights of French and English surgery. He was one of the founders of the Schuylkill County Medical Society, and also through a series of years its President; and was admired for his excellent personal and professional qualities, both by his medical associates and all those who enjoyed his acquaintance. The County Society which he represented in Conventions has been characterized at times by want of harmony among its own members, which has sometimes given it undue prominence in the State Medical Society meetings.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY, JANUARY 25, 1872.

THE PRESIDENT, DR. J. H. HUTCHINSON, in the chair.

DR. JAMES TYSON presented, for Dr. WM. PEPPER, the specimens from a case of *double pneumonitis*, admitted to the Philadelphia Hospital January 1, 1872, and dying on the 23d of the same month. The patient was a male, aged 46.

On admission, there was consolidation of only the left lower lobe. Being delirious, he left his bed, and, exposing himself, was attacked with inflammation of the *right apex*, which subsequently extended throughout this and the corresponding middle lobe. He died on the fifth day after admission and the ninth of the disease.

Post-mortem examination revealed red hepatization of the inflamed portions and congestive emphysema of the non-consolidated lobes. There was also some thickening of the left pleura from previous pleurisy. The kidneys were congested, and their cortical portion somewhat coarse-grained.

Dr. TYSON also exhibited the following specimens:

1. A heart presenting almost complete *stenosis* with *insufficiency* of the aortic valves, which were also the seat of *efflorescent calcareous vegetations*. The patient, a male, was 65 years old, and much emaciated; there were numerous petechial spots on the abdomen and right thigh, and the scrotum and buttocks were covered with *suggillations*.

Post-mortem examination revealed the left lobe of the *thyroid gland* about the size of a hen's-egg, containing in its centre three small cysts, of which the walls were the seat of complete calcareous change.

Pleura.—There was no fluid in the pleura. There were slight adhesions upon the anterior surface of the right side.

The *lungs* were moderately distended with air. The margin of the anterior lobes was emphysematous. Upon the anterior upper surface of the left lobe a wedge-shaped embolic patch was found, surrounded by a thin layer of pus. The posterior and lower surfaces of both lungs were oedematous, and filled with frothy mucus.

Heart.—The pericardium contained about 13i of straw-colored fluid. Its walls were smooth; the walls of the right ventricle were oedematous; the walls of the left ventricle were very much thickened; the mitral valves were normal. There was, however, almost complete stenosis here exhibited of the semilunar valves of the aorta, with calcareous vegetations.

The *liver* weighed 2 lbs. 5 oz.; was considerably diminished in size, indurated, tough, and resisting to the fingers.

The *kidneys* weighed 3½ oz. each; were decidedly diminished in size. The surface of each organ was covered with numerous pinhead-sized cysts, containing a clear straw-colored fluid. The hilus of the kidney was apparently much enlarged. The pyramids were congested; dark red in color. The Malpighian capsules were seen as bright-red spots.

The *spleen* was greatly diminished in all its dimensions.

2. An *enlarged sacculated cystic kidney*, in the pelvis of which lay a large calculus about an inch in diameter, and of undetermined chemical composition. The results were those ordinarily due to suppurative pyelitis.

3. A *kidney* which was the seat of numerous *thin, transparent-walled cysts*, characterized by the presence of clear, colorless contents which are known commonly to contain no urinary constituents,—simply albumen, and sometimes leucin and tyrosin.

Dr. C. B. NANCREDE presented a specimen of *total staphyloma corneæ*, and read the following history:

Georgiana M., æt. 7, had an attack of variola last March, for which she was treated in the Municipal Hospital. Shortly after her return her mother noticed a "white speck on the sight," which continued to enlarge until it reached its present development, although at times apparently remaining in a quiescent state. When first seen, a few days before the operation, the eye presented the appearance of a total staphyloma of the cornea, the projection being of a dense white color, except in one or two spots where the true corneal tissue in part remained. The ball itself was considerably atrophied, and was at times the seat of a good deal of pain,—not persistent, however, being generally present only when rapid growth was apparent; and for some weeks previous to this application for treatment, the growth had taken on fresh and rapid enlargement.

On testing vision, no perception of light was found to be present. The lids were stretched to permit of their covering the protrusion, which projected considerably beyond the normal position of the cornea. The only treatment that could be recommended was the removal of the offending organ, on account of the great risk of sympathetic inflammation attacking the other eye as long as it remained, especially as the little patient evinced some, although not much, photophobia in the sound eye.

Extirpation of the ball was preferred to mere abscission. The operation chosen was that introduced by Bonnet and O'Ferral in 1841, independently of each other, and which has great advantages over the old mode. It does not interfere with the cellular tissue of the orbit, it leaves most of the conjunctiva intact, and, by dividing the muscles close to their scleral attachments, gives a movable stump, besides causing but little hemorrhage, from the fewness of the vessels divided.

This specimen is of interest for two reasons: first, as being one of the sequelæ of the present epidemic; and secondly, as showing so clearly the mode of formation of staphyloma corneæ. As the pock is never found upon the cornea itself, the perforating ulcers which caused the protrusion must have been the result either of the debility consequent upon the previous illness, or of the plastic chemosis of the conjunctiva pressing upon and strangulating the vessels supplying blood to the cornea, thus producing necrosis of this tissue. If the latter be the true explanation, however, the resulting ulcer ought more to resemble that occurring under like circumstances in gonorrhœal ophthalmia, etc., which is crescentic and peripheral, not as it appears to have been in this case, where there evidently have been several, and at various portions of the cornea.

Pathologically, it is of interest to examine the mode of production of this affection, taking the present specimen as the text. An ulcer formed at one point, and continued to advance until a perforation was the result, through which opening the iris prolapsed as a matter of course. Soon the protruded portion became coated over with lymph; and from increased intraocular tension, produced by the irritation of the prolapsed iris, the cornea bulged outwards at this point. Now, either this process was repeated in a number of places, or the one protrusion so weakened the tissues that the staphyloma increased, gradually involving in its growth all the remaining

clear space, until finally it became this white, fibrous, globular projection, so little resembling the original cornea.

From the irritation of the protruded iris we had probably an irido-choroiditis, or irido-cyclitis, set up, which ended in atrophy of the ball. One of the principal reasons for considering that in this individual case the staphyloma was caused by one or more small perforating ulcers, is the presence of the lens, which, although not of full size, is *in situ*. If this growth had been produced by one large ulcer, when the perforation finally occurred the chances are strongly in favor of the lens also escaping at the same time.

Dr. J. E. MEARS presented *both ovaries, which had undergone cystic degeneration*, removed by Dr. Washington L. Atlee from a patient of Dr. W. L. Atlee, Jr.'s, January 17, 1872.

The patient, a resident of this city, had suffered from an abdominal enlargement about two years. She was married, and had never borne children. Menstruation ceased at the time the abdominal enlargement commenced.

She had been treated for a long time for ascites, and had taken large quantities of medicine: tapping had never been performed. At the time of the operation, fifteen pints of dark-brown fluid, sparkling with cholesterine crystals, were drawn off from the cyst of the left ovary, which occupied the central portion of the abdominal cavity. The right ovary, enlarged to the size of a small lemon, was attached by a pedicle, four inches in length, to the wall of the cyst of the left ovary.

The cyst of the left ovary was multilocular in character, and exhibited in an interesting manner the mode of development of the secondary endogenous cysts. The walls of the parent cyst were extremely vascular; the arterial and venous trunks, with their numerous diverging branches, could be distinctly seen; delicate vessels could be traced in the thin walls of the secondary formations. These walls are ruptured in the process of the development of the tumor, and the blood usually found in the fluid contents of multilocular cysts is without doubt contributed by these small vessels.

A portion of the right ovary was occupied by a small *dermoid cyst*, containing a mass of coarsely-granular fat, in which were imbedded a large number of short hairs of the same color as the hair of the head of the patient. Some few hairs were attached to the lining membrane, which in every respect exhibited its tegumental character.

The remaining portion of the ovary was filled with numerous small cysts, varying in size.

REVIEWS AND BOOK NOTICES.

A CLINICAL MANUAL OF THE DISEASES OF THE EAR. By LAURENCE TURNBULL, M.D., Physician to the Department of Diseases of the Eye and Ear of Howard Hospital of Philadelphia, etc. 100 Illustrations. 8vo, pp. 486. Philadelphia, J. B. Lippincott & Co., 1872.

In the preface the author disclaims having "simply recorded the views and opinions of others, but that he has added the results of his personal experience in seventeen years' private practice, and in the treatment of several thousand cases in the aural department of Howard Hospital." Nevertheless, the conflicting views and opinions of others—earlier and modern otologists—do constitute the major part of this volume; and the favor with which this new addition to the already extensive otological literature will be received must undoubtedly be dependent in a great measure upon the acceptability of its numerous selections and translations; but as many of these are new and from sources inaccessible to the general reader,—numerous extracts being taken from untranslated German publications,—they will no doubt prove interesting and instructive to many American readers.

The student, confronted by an array of eminent aural authorities, is, unfortunately, too often left by the author to decide for himself concerning diametrically opposite theories and modes of treatment. Certainly the author's long years of practical experience have afforded him ample opportunities of

fairly testing all of them; and his neglect to pronounce upon their relative merits and demerits can only be excused upon the grounds that "by contradiction is nourished the spirit of investigation."

The first fifty pages are devoted to anatomical descriptions of the ear and to the subject of acoustics. So far as the general practitioner is concerned, this part might as well have been omitted, for he lacks both time and inclination to read mere dry anatomy; nor can such epitomized descriptions satisfy the specialist, so long as there can be obtained so many excellent and elaborate treatises, both histological and anatomical, of the organs of the special senses. The embodiment of such elementary anatomy into a clinical text-book has always appeared to us a procedure of questionable propriety. Concerning this point, however, opinions differ widely, and we shall not attempt to argue it further.

Dr. Turnbull's anatomy is guilty of many sins of omission, and is not entirely free from errors; but, as our space is limited, we have to content ourselves with these generalities, and shall only point out a few instances.

No mention is made of the meniscus, which performs such important functions in the malleo-incudal and stapedo-incudal articulations. The old misnomer of tensor palati is used, instead of dilator tubæ. The ligamentum mallei externum is spoken of as a laxator muscle. Nor is any allusion made to those remarkable pyriform ganglionic structures in the mucous membrane of the middle ear described by Kessel and Politzer.

In the first ten chapters are discussed the best mode of conducting an aural examination and of making a differential diagnosis, the methods of removing foreign bodies and polypi from the external meatus, different diseases and injuries of the auricle, and otitis externa. For the latter disease, when caused by the presence of *aspergillus*, the author prefers the hyposulphite of soda or the bisulphide, as being the best antiparasitics.

Otitis media purulenta, the subject discussed in the eleventh chapter, is divided up into the impracticable classification of acute, subacute, chronic, and hypertrophic. The author's treatment for this affection is truly heroic. On page 176, having pointed out the importance of constitutional treatment by means of tonics, alteratives, etc., he recommends "also means of counter-irritation by blisters, croton oil, tincture of iodine, and, in some rare cases, the actual cautery; these are all necessary measures of success in removing the discharge."

"Quod ferrum non sanat, ignis sanat,"—an appropriate aphorism in pre-pathological ages; hardly in this nineteenth century.

Especially worthy of perusal will be found the last twelve pages of this same chapter, taken *in extenso* from one of Gruber's best articles upon the treatment of purulent and hypertrophic inflammation of the middle ear.

The succeeding chapter treats of otitis media involving the mastoid process and cells, and even the brain itself. This constitutes the otitis interna of the author,—rather an unfortunate term, as suggesting an affection limited to the internal or labyrinthian portion of the auditory apparatus; while the latter are classed under the head of "nervous deafness."

The thirteenth chapter is devoted to the consideration of simple catarrhal inflammation of the middle ear. Another equally lengthy abstract is taken from Gruber's text-book; in it will be found admirable directions for the use of the air-douche and catheter, and the employment of vapors or fluids injected into the cavity of the tympanum.

The importance of the rhinoscope in the diagnosis and treatment of the Eustachian tube and middle ear is ably discussed and fully illustrated.

Two chapters are devoted to the diseases and treatment of labyrinth, or nervous deafness. The author claims to have effected cures by the use of the constant galvanic current, also of faradization. The method as well as the formulæ of Brenner is discussed, but, judging from the very small number of cases treated according to it, the author is hardly in a position to give an impartial judgment concerning it.

Many of Toynbee's pathological records are freely interspersed throughout this book; but such rapid strides have been made in pathological science and modes of investigation

since Toynbee's time, that their republication is much to be regretted.

A very extended bibliography is added as an appendix. As no systematic arrangement, either of the subjects or of the authors, is adopted, it is next to impossible to find anything in so many pages.

BOOKS AND PAMPHLETS RECEIVED.

Proceedings of the American Association for the Cure of Inebriates. Second Meeting. Held in New York.

Report of the Committee on Criminal Abortion. Extracted from the Transactions of the American Medical Association.

A Practical Treatise on the Diseases of Women. By T. Gaillard Thomas, M.D., Professor of Obstetrics and Diseases of Women and Children in the College of Physicians and Surgeons, New York, etc. Third Edition. Enlarged and thoroughly Revised, with 246 Illustrations on Wood. 8vo, pp. 784. Philadelphia, Henry C. Lea, 1872.

A Plea for Scientific Reform. A Letter to Rev. Theodore L. Cuyler, D.D., on the Attitude of Physicians and Scientists towards the Temperance Cause. By George M. Beard, M.D.

GLEANINGS FROM OUR EXCHANGES.

VELOCITY OF VISION.—The last number of Pflüger's *Archiv für Physiologie* contains a paper of M. Baxt, of St. Petersburg, "On the time requisite for a visual impression to arrive at the consciousness, and upon the duration of the period of consciousness, caused by a visual impression of definite duration." From the experiments of Helmholtz and Exner, it has been shown that, if a number of ordinary letter-press letters be exhibited to the eye on a white ground, sometimes one, sometimes two or more of them are distinguished from the row, according to the duration of the impression, and that of the positive after-image. M. Baxt proceeded on the same principle, and his apparatus was similar to those employed by Helmholtz, consisting of two disks, which could be caused to revolve at known speed, but the posterior of which rotated twelve times more rapidly than the anterior. From the numerous experiments given, it appears: 1. That the consciousness of a given excitation is only realized or perfected by degrees; and 2. That, under the particular circumstances of his experiments, a period of one-twentieth of a second must elapse between the occurrence of a relatively simple excitation of six or seven letters suddenly placed before and withdrawn from the eyes, and its reception or formation in the consciousness. In other experiments he found that the time required for the comprehension of a complex figure was much greater than that for a simple figure, the proportion between an ellipse and a pentagon, for instance, being as 1 to 5. Researches on the time requisite for the production of consciousness with various strengths of illumination gave the result that this time was proportionate, within rather wide limits, to the degree of illumination; but if illumination was excessively strong or weak it increased.

NEURASTHENIA.—Under this name Dr. T. W. Fisher (*The Boston Medical and Surgical Journal*, February 1, 1872) describes a class of cases which, though frequent, are difficult to include under any definite name. They all, however, exhibit a variety of symptoms due to functional nervous disorders. After giving the details of several cases, Dr. Fisher says, "The one fact in connection with cases presenting features of depression, hysteria, or hypochondria which should be most insisted on, is that mental symptoms are as significant of nervous exhaustion as physical. The feelings and ideas depend as directly on the state of the nervous centres as any other of the nervous functions. Depression, irritability, suspicion, wilfulness, and all forms of morbid and disordered emotions running into fixed or extravagant ideas, are symptoms of the same kind as numbness, pain, paralysis, and spasm. They

result from disordered function in different parts of the same nervous apparatus, and may depend on the same condition of nervous exhaustion. In dealing with nervous cases, it is important to remember that every symptom, mental or nervous, means *something*, and unless we patiently analyze both we fall short of the requirements of the case.

ACUTE GLANDERS IN A MAN; CURE.—Dr. Tüske reports in the *Wiener Medizinische Presse*, December 31, 1871, a case of glanders occurring in a man. After alkaline bath and the internal administration of quinia had been found without effect six grains of carbolic acid in solution were ordered to be taken daily. Under this treatment the patient recovered, and was discharged from the hospital on the thirty-fifth day.

MOLLUSCUM CONTAGIOSUM DEPENDENT UPON A PARASITE.—Mr. Balmanno Squire thinks that he has discovered parasitic spores in the sebaceous matter which forms the pulp of the tumors in molluscum contagiosum. Before the sebaceous mass was examined microscopically it was digested in ether, —a process by which it was very considerably shrivelled. The spores, he thinks, are somewhat longer than those of the parasite of favus. Mr. Squire believes that the parasite causes, by the irritation it excites in the sebaceous glands, the increased secretion of sebaceous matter which characterizes this disease.

A GREEN PEA REMOVED FROM THE LACHRYMAL CANAL.—Mr. Hulke exhibited at a recent meeting of the Pathological Society of London (*Lancet*, January 20, 1872) a green pea (?) which had been removed from the lachrymal canal of a young lady who had been under treatment for a small abscess in the situation of the right lachrymal canal, which, when opened, exuded a greenish globular mass like a green pea; and the patient stated that some months previously she had passed a pea into her nose for the amusement of a child, and that the said pea had disappeared. How the pea had managed to travel up the nasal duct into the lachrymal canal was not explained. The body was referred to Dr. Bristowe for careful examination.

MULTIPLE LYMPHOMA SUCCESSFULLY TREATED BY ARSENIC.—Billroth reports in the *Wiener Medizinische Wochenschrift*, 1871, No. 14, the case of a woman 40 years of age, whose health ten months previously to her coming under his care had always been good. When she was admitted into his ward, the glands of the neck on both sides formed tumors the size of the fist; those of the axilla and groins were as large as apples, and those of the elbow were as large as an egg. The glands of the mesentery appeared enlarged. The examination of the blood showed that there was leucocythæmia present. Quinia given in large doses was entirely unsuccessful in relieving this condition. Billroth then gave Fowler's solution in doses of two and a half drops, gradually increased to ten drops, three times daily. Fourteen days after the commencement of this treatment a diminution in the size of all the tumors was noticed; and when, two months later, the patient was discharged, a gland the size of a hazel-nut only could be felt in the neck, and the glands in other parts of the body were reduced to a minimum.

EXSECTION OF CANCER OF THE ŒSOPHAGUS.—M. Billroth proposes (*L'Union Médicale*, December 30, 1871; from the *Archives für klinische Chirurgie*) the exsection of cancer of the œsophagus in cases in which the structure is accessible by an operation. He has never done the operation, but, in consequence of some experiments upon a dog, thinks that it is quite practicable. He excised about an inch and a quarter of the œsophagus of that animal, attached the lower portion by two sutures to the edges of the wound, and nourished the animal with milk by means of an œsophagian tube. The sutures were removed a week after the operation; the discharge from the wound was considerable, but it diminished rapidly with the cicatrization of the external wound. This was complete at the end of ten weeks. The cicatrix was gradually dilated by the introduction of bougies, and the dog soon began to eat meat and potatoes, which he swallowed without difficulty. Three months later he was killed. The œsophagus presented a simple annular cicatrix about half an inch wide, which did not interfere at all with the permeability of the œsophagus.

RAPID CURE OF CORYZA.—M. Barrier strongly advocates (*Medical Times and Gazette*, January 6, 1872; from the *Lyon Medical*, December 24) a modification of the treatment recommended by Mr. Pretty, of London, in 1845,—viz., the employment of the nitrate of silver, substituting the powder for the solution. He recommends: 1. To sneeze during the whole course of the disease as seldom as possible, keeping the mouth wide open in order to expel the column of air, which would irritate the walls of the nares; 2. To blow the nose seldom and incompletely; 3. To sniff up strongly a very small quantity of the powder (nitrate, one part; sugar, reduced to an impalpable powder, nine parts) three or four times a day.

SPONTANEOUS RUPTURE OF THE SPLEEN.—Surgeon F. Odevaine, Bhopal Battalion, reports in *The Indian Medical Gazette* for December 1, 1871, a case of rupture of the spleen occurring spontaneously. The subject was a woman aged 22 years, who just previous to her death had been engaged in grinding corn, and who, it was ascertained positively, had not received a blow in the left hypochondriac region. Feeling faint, she sat down and drank a little water, after which she was able to proceed a little farther, when she was overcome with giddiness and almost immediately died. A post-mortem examination was made. Several pints of serum and clotted blood were found extravasated within the peritoneum. The spleen was about four times its normal size, not remarkably friable, and presented a superficial rent on the middle of its inner aspect about $2\frac{1}{2}$ inches long, and running parallel to its length. The deceased had been subject to epilepsy and ague. The rupture in this case, it will be observed, was on the concave surface or hilus of the spleen, the site of entrance and exit of its numerous very large vessels, and, though not very deep, probably in consequence of occupying its most vascular part, fully accounted for the rapid death of this woman, which took place in twenty minutes from the time of her first complaining of giddiness. In cases of ruptured spleen caused by violence, the injury is generally found at the external or anterior edge of the organ.

GOITRE AND ITS TREATMENT.—Dr. Carl Schwalbe, of Zurich, recommends (*Virchow's Archiv*, December 15) injections of alcohol or of the tincture of iodine in the treatment of goitre. He has met with but one case in over one thousand cases in which death could be ascribed to the use of these injections. The older the goitre, the larger and the more considerable the tissue-changes, the more unfavorable is the prognosis and the more energetic and heroic must the treatment be. The struma follicularis mollis may often be dissipated by the internal use of iodide of potassium, especially if the patient is able to change his residence. The cure, however, will take place sooner if the tumor is injected with alcohol or the tincture of iodine. Certain forms of cystic struma may also be successfully treated by these injections, but in the indurated form, in which the canula enters with great difficulty and no liquid can be made to penetrate the tissues, no marked result is produced. In these cases electrolysis will be found more useful, and as a last resource we have the operation for the removal of the tumor.

In the vascular form of struma the injection of alcohol or of tincture of iodine is not unattended with danger; and we must have recourse to electrolysis.

CONSTITUTIONAL SYMPTOMS FOLLOWING THE BITE OF A RAT.—Dr. Charles W. Earle reports a case of this kind in the January number of the *Medical Examiner*.

CÆSAREAN SECTION AFTER THE DEATH OF THE MOTHER, WITH THE PRESERVATION OF THE CHILD.—The operation was performed by M. Molinière (*L'Abeille Médicale*, October 14) upon the body of a woman a few minutes after her death from convulsion. When delivered, the child did not present any sign of life. Recourse to insufflation, mouth to mouth, and to artificial respiration, was attended at first with but little success. At last the child breathed, and soon afterwards began to cry.

DEATH FROM BICHLORIDE OF METHYLENE.—A married woman (*Medical Times and Gazette*) 44 years of age, who was about to undergo an operation for cancer of the breast, expired suddenly while under the influence of bichloride of methylene.

MISCELLANY.

THE PHYSICIANS OF PHILADELPHIA AND THEIR BRETHREN OF CHICAGO.—We are requested to insert the following letters: "H. LENOX HODGE, M.D.,

"No. 903 Walnut St., Philadelphia, Pa.:

"DEAR SIR,—Your letter of 6th inst., to Dr. N. S. Davis, was laid before our committee at its last meeting (Jan. 9).

"You are kind enough to say that the physicians of Philadelphia have contributed the sum of \$1000 toward the alleviation of the necessities of their Chicago brethren.

"I am instructed by the committee to express, as far as can be done in language, the deep and heartfelt gratitude of the profession here for this additional expression of generosity and sympathy from Philadelphia physicians, and also to suggest that, in view of the difficulty of ascertaining the exact necessities of every individual on our list of more than one hundred sufferers, we deem it best to accept on their behalf your offer of money, which each can use as his own judgment may dictate.

"Please send contributions of all sorts to my address, and oblige

"Yours, very respectfully,

"WALTER HAY, M.D.

"No. 384 MICHIGAN AVENUE, CHICAGO, January 10, 1872."

"H. LENOX HODGE, M.D.,

"No. 903 Walnut St., Philadelphia, Pa.:

"DEAR SIR,—Yours of the 13th inst. was received on the 15th; I have been prevented by illness from acknowledging it sooner. Dr. Ludlow's letter, with check for \$1115 enclosed, was also received.

"In the name of our committee in behalf of our suffering physicians, accept from me the assurance of our most profound gratitude for this substantial manifestation of charity and professional regard.

"Thanks to the benevolence of yourselves and professional friends in other cities, our physicians are now placed in a position to help themselves.

"Accept my thanks for your kind attention regarding the catalogues, and believe me,

"Very respectfully,

"WALTER HAY, M.D.

"No. 384 MICHIGAN AVENUE, CHICAGO, January 19, 1872."

SIR WILLIAM JENNER AND DR. GULL.—It is said that the former of these gentlemen will be made a Knight of the Order of the Bath, and the latter a Baronet, for the eminent medical services they have recently rendered to the Prince of Wales.

In reference to the elevation of medical men to the peerage, Charles Lever has recently written, "I own that I am anxious to see some share of the high honors of the state bestowed upon a class which, whether simply regarded as numbering among them some of the ablest thinkers and writers of the age, or conferring more gratuitous services on the world than every other rank and condition together, are less recognized than any other. * * * * *

"Among all the trained and polished intellects you assemble in the Upper House, you have not got that special form of mind that distinguishes the doctor. You have not got a man whose daily life and labor is passed between the deepest problems of science and the practical working of the great truths he has been considering. In knowledge of his fellow-men he is without a rival. His study of temperament is a study of character; and this not in one class or condition, but

in every walk and rank, from the palace to the hovel. He is the one man with whom no fallacy can succeed that assumes to say what men in this or that station might do or think; for he knows them all."

THE MEDICAL STAFF OF THE PRESBYTERIAN HOSPITAL.—At an election held on Monday, February 19, the following-named gentlemen were chosen officers of the Presbyterian Hospital:

Consulting Surgeons, Prof. D. Hayes Agnew, M.D., Prof. S. D. Gross, M.D.

Consulting Physicians, Dr. J. M. Da Costa, Dr. J. L. Ludlow. *Surgeons*, Dr. Oscar H. Allis, Dr. Thomas B. Reed, Dr. H. Lenox Hodge, Dr. Wm. G. Porter.

Physicians, Dr. E. Wallace, Dr. D. F. Woods, Dr. J. F. Meigs, Dr. S. W. Mitchell.

Obstetricians, Dr. Robert M. Girvin, Dr. John S. Parry.

Ophthalmic Surgeons, Dr. W. W. McClure, Dr. George Strawbridge.

Pathologist, Dr. De Forrest Willard.

At the dispensary of the Wills Ophthalmic Hospital in this city, 2590 new patients were treated last year for diseases of the eye. At the Eye and Ear Department of the Philadelphia Dispensary the number of new eye-cases prescribed for was 884, and the whole number of eye-cases was 11,066.

THE CANINES AT THE HUB.—We take the following from the New York *Tribune*:

"The dogs of Boston, like their brethren in Philadelphia, are in luck, for the Prevention of Cruelty Society has resolved to erect a Boston 'Home for Dogs.' To this all vagabond, homeless, hearthless curs will be conducted. After they have been comfortably fed and cleaned and warmed, we suppose that they are to be tenderly chloroformed out of existence; for really we do not see what else the Society can do with its protégés. The funds of the corporation will soon be exhausted if all these dogs are to be licensed at its expense. We presume that to killing the Society has no insuperable objection, because it is announced that at the 'Home' worthless animals, including horses, will be killed to order after the mildest methods. As for dogs, there are too many of them in the country now; and it is rather a difficult question to decide whether a dog with an incurable passion for killing sheep is entitled to the benefit of clergy."

THE WILLS OPHTHALMIC HOSPITAL.—The Board of City Trusts at its last meeting determined to make certain changes in the management of this institution. The office of Assistant-Surgeon will be discontinued after June 1, and the present Attending-Surgeons are to hold office only until next May, when, instead of four Attending-Surgeons as at present, it is proposed to elect eight, who are hereafter to be elected annually in December. The dispensary is to be kept open morning and afternoon, so as to afford increased facilities to applicants for relief.

It is probable that all the present Attending-Surgeons will be re-elected, and that, for the remaining positions, gentlemen who have made diseases of the eye a specialty will be chosen. This change has been thought necessary in consequence of the large number of patients who are treated at the dispensary of the hospital. The medical staff will be larger than that of the London Hospital, and seems disproportionately large to the size of the hospital, which contains only forty beds.

THE *Swiss Times* says that the ladies at present attending the Zurich University are so numerous as to constitute about one-tenth of all the matriculated students.

LIBRARY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.—Five hundred and seventy-seven volumes were added to this library during the past year. The whole number of volumes in the library is now over 15,500.

THE VALUE OF AN OPERATION.—A hospital surgeon received, a few days since, a letter, of which the following is an exact copy:

"DR. H.: SIR,—Do you pay for persons to be operated on in the Hospital I know of too persons who is affected with Varicocele I think I could send them to you at least one of them.

"please awncer in Return Mail. address," etc.

MORTALITY FROM SMALLPOX.—The deaths from smallpox in Philadelphia for the weeks ending February 10 and 17 were respectively 183 and 136. Of this number 179 were minors.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending	
	Feb. 10.	Feb. 17.
Consumption	48	52
Other Diseases of Respiratory Organs	46	68
Diseases of Organs of Circulation	23	28
Diseases of Brain and Nervous System	57	61
Diseases of the Digestive Organs	23	23
Diseases of the Genito-Urinary Organs	8	12
Zymotic Diseases	210	157
Cancer	11	6
Casualties	6	5
Debility	29	22
Intemperance	3	2
Old Age	10	17
Poisoning	0	1
Scrofula	0	1
Suicide	0	2
Stillborn	21	9
Syphilis	0	2
Tumors	0	1
Unclassifiable	11	16
Unknown	4	1
Totals	510	486
Adults	251	248
Minors	259	238

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM FEBRUARY 5, 1872, TO FEBRUARY 18, 1872, INCLUSIVE.

MILLS, MADISON, SURGEON.—By S. O. 30, War Department, A. G. O., February 5, 1872, granted leave of absence for sixty days.

FRANTZ, JOHN H., SURGEON.—By S. O. 38, War Department, A. G. O., February 14, 1872, to report in person to the Commanding General, Department of the South, for assignment to duty.

MACKIN, CHARLES, JR., ASSISTANT-SURGEON.—By S. O. 33, War Department, A. G. O., February 8, 1872, to report to the Commanding General, Department of the South, for assignment to duty.

HOFF, ALEXANDER H., ASSISTANT-SURGEON.—By S. O. 31, War Department, A. G. O., February 6, 1872, assigned to duty at Fort Columbus, New York Harbor.

KIMBALL, J. P., ASSISTANT-SURGEON.—By S. O. 33, War Department, A. G. O., February 8, 1872, assigned to temporary duty at Fort Columbus, N. Y. Harbor, to accompany the first detachment of recruits to New Orleans, La., and, on arrival, report to the Commanding Officer, Department of the Gulf, for assignment to duty.

LORING, L. Y., ASSISTANT-SURGEON.—By S. O. 18, Department of the Missouri, February 2, 1872, to proceed to Fort Leavenworth, Kansas and report to the Commanding Officer for assignment to duty.

FRIDAY, MARCH 15, 1872.

ORIGINAL LECTURES.

ANOMALIES OF TENSION IN THE MEMBRANA TYMPANI AND THE OSSICLES OF HEARING.

PATHOLOGY AND TREATMENT.

Being in substance a lecture delivered before the "Aertlichem Verein" of Vienna.

BY PROF. ADAM POLITZER.

Reported by Dr. C. H. BURNETT, of Philadelphia, late Assistant to Prof. Politzer.

THE following lecture refers to a series of disturbances in the function of hearing, arising from abnormal tension in the tympanic membrane and the ossicles of hearing. It is well known that the majority of cases of deafness which come under our notice have their pathological seat in the middle ear, where the starting-point is the lining membrane of the tympanum. Here the primary changes are swelling and thickening of the tissue, and the secondary changes are seen in the form of serous, mucous, or purulent exudations, together with formations of organized connective tissue, by which the membrana tympani and the chain of ossicles are bound together and to the inner wall of the tympanic cavity.

In this lecture, however, those changes of tension in the membrana tympani and the ossicles which arise as secondary conditions of inflammatory affections of the middle ear shall claim especial attention.

Let us consider that altered tension of the membrane, already well known, which is caused by a "locking-in"* of the air in the cavity of the tympanum.

The Eustachian tube is widest at the pharyngeal and tympanic ends, while its narrowest point is at the junction of the osseous and cartilaginous portions, where its diameter is about *one line*. If a catarrhal condition of the mucous membrane of the tube occur, either primarily, or secondarily through extension from the tympanum or naso-pharyngeal surface, the canal may become so narrowed at the point already alluded to as to be impervious, and consequently the communication between the tympanum and the naso-pharyngeal space may be shut off. The immediate result of this impassable condition of the Eustachian tube is an absorption of the air contained in the tympanum, in consequence of which the pressure of the outer air gains a preponderance and the membrane is pushed inwards. By the action of this force upon the membrane the chain of ossicles is also pushed inwards, and the vibrating power of the sound-conducting apparatus is greatly reduced.

The deafness which ensues is increased by the augmented intra-labyrinthal pressure; for the stapes is forced into the fenestra ovals, and an increased pressure is thus brought to bear upon the expansion of the auditory nerve through the fluids of the labyrinth. The deafness which follows this event may be compared to the blindness caused by increased intraocular pressure where a slight pressure is exerted upon the bulbus oculi. The appearances of the membrane following such an impassable condition of the Eustachian tube are so characteristic that from them alone we are often able to diagnose impermeability of the Eustachian tube.

Besides a well-marked concavity of the membrane, we find the malleus drawn inwards and backwards, or, as Von Trötsch has expressed it, perspective-ly foreshortened. The processus brevis, however, which lies above the axis of revolution in the malleus, projects

greatly outwards into the meatus auditorius externus, and from it are seen two gray folds of the membrana tympani, running one backwards and the other forwards.

The importance of these folds will become more evident as we shall later consider an operation performed upon the posterior one. The color of the membrane passes from a normal neutral gray mixed with yellow to a dark-gray color.

According to a series of investigations which I have carried out in the past year, the membrana tympani exhibits a peculiar conduct, in cases of impermeability of the Eustachian tube, with the pneumatic aural speculum of Siglé. This differs from an ordinary aural speculum in that at its upper and broader opening it contains an obliquely-placed plate of glass, and at its side an opening connected with a small air-bag by means of a slender gum tube. That this may be placed air-tight into the meatus, its smaller end is covered with a piece of elastic tubing. If now, after the speculum is placed in the meatus, the air in the meatus is alternately condensed and rarefied, we see in the normal condition of the membrane free motion of the same, especially well marked between the handle of the hammer and the periphery. Most strikingly is the motion exhibited by means of the alterations in the appearance of the pyramid of light at the antero-inferior portion of the membrane.

This speculum has been used by Siglé in cases where he has wished to determine whether adhesions of the membrane to the promontory of the cochlea were present.

In cases of impermeability of the Eustachian tube, if this speculum is used only a very slight motion of the membrana tympani is observed. As soon, however, as the Eustachian tube is rendered pervious, either by means of the Politzer method or with the ordinary catheter, upon examining it with the speculum a relatively greater motion of the membrana tympani will be observed than is ordinarily found in a normal condition.

Returning to our subject, we shall discuss the results of a continuous closure of the Eustachian tube. First, we shall observe, in consequence of the unilateral pressure of the outer air upon the membrane, that the fibres of the membrane are stretched and at last lengthened, so that the area of the membrane is increased. If now the Eustachian tube is made pervious and the membrane again pushed outwards, it is observed that the membrane is flaccid and folded. In such a case, if the closure of the tube has not lasted for a long time, the fibres of the membrane can contract, attain again their normal length, and the tension of the membrane be restored. However, in cases where the closure of the tube has existed for some time, the membrane is not only stretched, but the fibres are separated from each other and become atrophied; and to such a degree that, when the tube is again rendered permeable to the air, the membrana tympani remains relaxed, and swings to and fro with every change of atmospheric pressure in the middle ear.

It is evident that a membrane thus relaxed must be continually pressed inwards, since the pressure of the atmosphere within the cavum tympani is continually less than that of the outer air. Consequently the chain of ossicles will likewise be pushed inwards, and, after the Eustachian tube is rendered pervious and the catarrhal swelling of the middle ear has disappeared, permanent disturbances in the hearing may remain behind.

In another series of cases, a pathological condition may arise (which was first pointed out by me) causing a considerable destruction of hearing. It is a secondary retraction of the tendon of the musculus tensor tympani. By the sinking in of the membrane, the point of insertion of the tendon of the tensor tympani muscle must approach the inner wall of the tympanum, and the

* Absperung.

tendon consequently be relaxed. The result of this relaxation is a retraction and a shortening of the tendon, whereby the malleus and the entire chain of ossicles of hearing are pressed inward and kept in a firmly-fixed condition. One of the most marked diagnostic facts in such a case of retraction of the tendon of the tensor tympani muscle is the disappearance, in a few seconds, of the improvement in hearing which follows the introduction of air into the middle ear. We cannot suppose that this is caused by the absorption of the air in the tympanum, because it would be impossible for so much air to be absorbed in so short a time. It is much more probable that the membrane is pushed outwards by the stream of air entering the middle ear, and that the tendon is at the same time extended, which results in an improvement in the hearing; in a few moments, however, the tendon contracts and the improvement in the hearing disappears. A permanent shortening of the tendon may arise from the contraction of the sheath subsequent to chronic inflammation of the lining membrane of the middle ear. We have already mentioned that, in consequence of the sinking in of the manubrium of the malleus, the folds of the membrana tympani arising from the short process of the malleus project far into the meatus auditorius externus. The greater the tendency of the manubrium of the malleus inwards, the more tense are these folds; and, as a result, the manubrium of the malleus is firmly held by two forces, viz., by the tendon of the tensor tympani and the tightly-stretched folds of the membrana tympani, so that the malleus is no longer able to transmit the waves of sound which fall upon the membrane.

So far as the treatment of these anomalies in the tension of the sound-conducting apparatus is concerned, we shall consider first those cases where the closure of the Eustachian tube has been of short duration, and where the membrane has not become atrophied. In these cases, introduction of air into the cavum tympani, by means of the Politzer method or with a catheter, will be sufficient to place the membrana tympani again in its normal position.

If, however, after the tube is again rendered pervious to the air and the catarrh of the middle ear is removed, the membrana tympani, partly through the action of the tensor tympani muscle and partly through relaxation of the fibres of the membrane, is again drawn inwards, and the improvement in hearing following the introduction of air rapidly disappears; then we may undertake the hermetical closure of the external auditory meatus. By the use of the manometer it can be shown that by hermetically closing the meatus auditorius externus the pressure of the outer air is removed from the membrana tympani, and its retraction prevented. Where this means of cure is undertaken, it will be best performed by plugging the external meatus with cotton saturated in simple cerate. The entire mass used should be about the size of a hazel-nut, and should be introduced by the finger into the meatus just far enough to fill the outer part of the cartilaginous portion of the auditory meatus. As soon as the external auditory meatus is hermetically closed, the ticking of a watch will not be heard, even in close proximity to the ear, while articulated words will be heard only at very short distances; and by these signs we can assure ourselves that the meatus is perfectly closed. Usually this can be performed by the patient, and is to be done at bedtime. The meatus should be kept closed through the night. This may be repeated for several evenings in succession, after which a pause of several days must ensue. In consequence of this hermetical closure of the meatus, the previously-mentioned rapid disappearance of the improvement in hearing, after the introduction of air into the tympanum, is prevented, and at the same time the subjective noises are diminished. If, however,

an atrophied condition of the membrana tympani has arisen, these methods of treatment will be of no avail in removing the deafness caused by a relaxation of the tissue of the membrane. In such cases I have already advised an operation which has been followed by good results in a series of cases extending over the past year,—viz., the incision of the membrana tympani with a cataract-needle. The point where the incision is to be made is between the manubrium of the malleus and the periphery of the membrane. The operation may be performed four or five times in two or three days. The size of the puncture should be from half a line to a line in length. As a rule, cicatrization of the edges of the wound occurs in twenty-four hours; and I have never seen a suppurative inflammation of the membrane follow the operation.

The amelioration of the hearing following the air-douche will be more enduring, in consequence, as I believe, of the slight adhesive inflammation caused by the puncture; for through it the tissue of the membrane gains consistence and firmness, whereby the functional disturbances caused by the previous laxity of the tissue are either partly or wholly removed.

We now come to the treatment of those cases where, by the retraction of the manubrium of the malleus, the folds of the membrana tympani arising from the short process are abnormally stretched. We have already seen that, by the action of the tensor tympani muscle on the one hand and the tension of the membrane on the other, the malleus is so firmly fixed that its vibratility is reduced to a minimum. Therefore, in a series of cases where an examination of the membrana tympani has shown that such a condition was present, and when the intense hardness of hearing was benefited neither by the introduction of air nor of medicated fluids into the middle ear, I have undertaken the *incision of the posterior fold of the membrana tympani*, in order to render the firmly-fixed manubrium more movable. For the performance of this operation I have used a small knife, rounded at the point, very sharp, and curved from the handle at an angle of 45°. The incision is made at right angles to the long axis of the fold from above downwards, or in the opposite direction; and the most suitable point for it is midway between the processus brevis and the peripheral end of the fold. The cutting through the fold is, as a rule, accompanied by a grating noise, and the edges of the wound gape apart,—symptoms which point to a stretched condition of the fold of membrane. The hemorrhage from the operation is slight, and a closure of the artificial perforation follows in one or two days. The good result of the operation depends greatly upon the changes which have occurred in the middle ear. The improvement in the hearing will be all the more considerable the less the chain of ossicles are loaded with pathological products. Furthermore, if synechiæ exist between the ossicles of hearing and the walls of the tympanum, the disturbance in the hearing will be very slightly or not at all altered by the operation.

From among the cases operated upon, we will choose two for recital:

I. Captain I., 40 years old, two years previous complained of an affection of the right ear, the left remaining normal. The affection on the right side began with tinnitus, to which, on the fourth day, succeeded deafness. The deafness increased steadily for several months, and at last became very great, while the tinnitus ceased.

An ocular examination of the right ear showed the membrane to be gray and clouded, drawn in; the short process, as well as the folds arising from it, projecting markedly into the meatus auditorius externus. The watch not heard when laid upon the auricle; loud words only at a distance of three to four centimetres. The tuning-fork, when set upon the head, perceived only in the affected ear,—a symptom which, in connection with the above-described appearances on the membrana

tympani, pointed conclusively to an affection of the sound-conducting apparatus.

After the right Eustachian tube was rendered pervious by the introduction of air according to the Politzer method, the hearing-distance for words increased to thirty-five centimetres, and the distance remained unaltered after the use of the catheter. The treatment consisted in the injection of several drops of a solution of bicarbonate of soda (gr. v to fʒi) by means of a catheter into the middle ear, in alternation with introduction of air according to the Politzer method. As after five days of this treatment no further improvement in hearing occurred, I undertook the incision of the posterior fold of the membrana tympani, as already described.

Immediately after the operation the watch was heard at two centimetres, and words were perceived at three metres' distance,—an improvement which continued constant during the succeeding days of the treatment.

Less favorable was the result in a second case :

The patient, a lady 45 years old, became deaf twenty years previous, in consequence of a chronic catarrh of the middle ear, affecting both sides. The deafness has increased greatly in the last few years, and within five weeks the patient had become so deaf as to be unable to hear words spoken in immediate proximity to her, or with the speaking-tube. In addition to the hardness of hearing, very severe subjective noises are present in both ears. The examination revealed an appearance in the membrana tympani analogous to the foregoing case. A loudly-ticking watch is not heard, either in contact with the auricle or through the bones of the head, and articulated speech is not heard at all.

During the introduction of air into the middle ear by means of the catheter, a dry, sharp, and high sound is perceived by means of the otoscope, such as I have often heard in cases of excessive retraction of the membrana tympani, atrophy and cicatrization of the membrane. After the Eustachian tube was rendered pervious the watch was heard on the right side *in contiguo auriculi*, and words in the immediate vicinity. On the left side the deafness remained unaltered.

The treatment in the succeeding week remained without any further effect, and therefore the cutting through of the posterior fold of the membrane was undertaken. On the right side the hearing of words increased immediately to one-third of a metre; on the left side the operation produced no effect, and we may presume that on this side a complete ankylosis of the ossicles had already been developed.

Among the not uncommon cases of altered tension of the membrana tympani are those caused by the formation of cicatrices in the membrane. In these cases the tissue composing the cicatrix is almost structureless, contains epithelium characterized by its large size, and in the mass of new tissue may be found at times the peculiar fibres of the membrana tympani. That the degree of deafness is not dependent upon the size of the cicatrix, but upon the changes occurring at the same time in the ossicles of hearing, has already been mentioned (*Beleuchtungsbilder des Trommelfells*, 1865); nevertheless, there are cases where the cicatrix alone is the cause of the deafness.

This supposition is justifiable in those cases where no catarrhal secretions are found in the middle ear, and where the improvement in the hearing following the introduction of air into the middle ear is seen to disappear as the cicatrix recedes to its former position.

The operative measures to be adopted in these cases are incisions of the cicatrix, repeated once or several times with the double-edged knife. By the incision, as already mentioned, a slight inflammation is excited, attended by favorable results due to the thickening of the tissue composing the cicatrix. The membrane is made firmer and its vibrating powers increased. In a series of cases the previously sunken cicatrix becomes less sunken, while in other cases the cicatrix, several weeks subsequent to the operation, gains its former appearance, without, however, a recession of the improvement in hearing. Anomalies in the tension of the

membrana tympani occur also through adhesions between the membrane and the inner wall of the tympanum. These synechiæ arise most frequently in the course of purulent inflammation of the middle ear, with perforation of the membrana tympani. The disturbance in the function of hearing will of course depend upon the locality of the adhesions. If these are, as I have repeatedly seen, in the inferior half of the membrane below the manubrium, the deafness will be but slight, if the ossicles of hearing are at the same time free from the products of disease. Quite different, however, are those cases where the malleus and the other ossicles are included in the territory of the adhesion. In these cases the degree of deafness will depend upon the rigidity of the adhesions. The treatment here will depend upon the degree of deafness, and sometimes upon the condition of the membrane as revealed by an examination. In most instances we must confine ourselves to the introduction of air into the tympanum, by which the bands of connective tissue are stretched and rendered more vibratile. Generally the improvement in hearing will not be permanent, because in a short time after the treatment the formations of connective tissue will contract again.

It has been proposed to cut through the synechiæ between the membrane and the inner wall of the tympanum. If, however, the adhesion, no matter where it may be, is attended with only slight disturbance in the hearing, an operation of such a nature might make the matter worse, by exciting an inflammation which may be followed by fresh adhesions. I cannot, therefore, approve of such an operation, even where considerable deafness is present; for, though the operation is simple, we are unable to prevent the reunion of the membrane with the inner wall of the tympanum. I consider such an operation indicated only in those cases where adhesions of the membrane are visible externally in the shape of cord-like ridges binding the manubrium to the periphery of the membrane or the manubrium to the joint of the incus with the stapes, and interfering with their motion. In such cases I have seen very considerable improvement in hearing after the cutting of these bands.

ORIGINAL COMMUNICATIONS.

CASE OF EXTRA-UTERINE FŒTATION.

BY W. CHARLES PERKINS, M.D.

ON May 20, 1871, Mrs. K., æt. 31 years, called to consult me concerning some uterine trouble, from which she had been suffering for the past three years. She stated that up to October, 1868, she had enjoyed fair health, having had two living children, with good deliveries, and did fairly well afterwards; that on the 4th of October, 1868, she with her friends went into the city to witness the great McClellan parade, and that, whilst standing on the sidewalk, some intoxicated men in a wagon attempted to drive over them. The fright occasioned an abortion, on the 16th of that month, of a fœtus three months old. She further stated that within a week afterwards she was seized with violent pains in the lower part of the abdomen, accompanied by high fever, costive bowels, and difficult micturition; and that she continued to suffer repeated attacks until the last of January, 1869.

Her health then became somewhat better, but she still remained weak and feeble, with no appetite, with costive bowels, and with her menses occurring, from that time until I saw her, irregularly,—at times every two weeks, every three weeks, and sometimes after an interval of two or three months. A dark offensive discharge now setting in, she placed herself in the hands of a professed gynecologist, who treated her for ulceration of the womb, and "burned off" some ulcers, at intervals of from one to two weeks, for nearly two years.

I found her anæmic, thin, and much reduced by severe pelvic pains, loss of appetite, and general malaise. She had menstruated irregularly every two or three weeks until the present time. A vaginal examination revealed a soft and flabby condition of the cervix, with thin watery discharges like coffee in color, an enlarged and soft uterus, much prolapsed, but no ulceration or inflammation.

On separate occasions I made two of these examinations with like results, but did not venture to use the sound, as she informed me that her doctor had insisted that she was pregnant; and I therefore preferred to await developments. On May 29 her mother brought to my office what she supposed was an aborted ovum, expelled by her daughter. It resembled a mass of solid flesh, of a pale color, and felt in the hand like a small placenta; but on a more minute examination I could detect no semblance of a cord or point of attachment, and thought, therefore, that it was a blighted ovum. Very unfortunately, I let the mother take it away with her. On the 30th of May I was sent for in the middle of the night, and found Mrs. K. suffering from every symptom of peritonitis; but this passed off in about ten days. On June 4 she was again attacked in a similar manner, this time with what appeared like a pelvic hæmatocele, as upon examining the vagina, which was hot and very sensitive, there appeared surrounding the uterus a soft swelling, which gave the most exquisite pain when touched. Her condition at this time was truly critical: the pain was agonizing; she had a high fever, with a weak and feeble pulse of 150, attended by collapse. She, however, revived out of this, but was still very feeble and prostrated, suffering from constant pain, which was kept bearable only by large doses of morphia. Feeling the need of additional advice, on July 6, during another violent attack, I called in Dr. William Goodell, who, after being informed of the supposed abortion in May, proceeded to make as careful an examination as the exquisitely tender vagina and abdomen would permit. He found the cervix immovable, the os patulous; the roof of the vagina hard, hot, and exquisitely sensitive; the abdomen tympanitic; and the pelvis containing an irregular tumor, projecting very decidedly towards the left iliac region. In view of these symptoms, Dr. G. pronounced the case to be one of perimetritis. Under treatment, the symptoms again subsided, leaving in the left groin a large irregular tumor which was excessively painful to pressure. Upon an examination *per vaginam*, always unsatisfactory from the extreme tenderness, a tumor could be felt encircling the left side of the uterus as far front as the median line, and back to the Douglas cul-de-sac. On the 14th of July she was subjected to another attack of violent pain and high fever, followed by collapse of all the vital powers. I then called in Dr. D. H. Agnew, who pronounced in favor of pelvic cellulitis. A second tumor now developed itself in the *right* groin, which acted precisely like that of the left. After a long and tedious illness, attended by repeated attacks of violent pain, high fever, and collapse, which seemed, in the order of their coming, to appear at such intervals as corresponded to her former menstrual flows,—that is, as was habitual with her, about every two or three weeks,—she slowly began to mend, the tumors apparently subsiding gradually. On the 20th of August she informed me that another tumor was growing in the median line. I watched its rapid growth with considerable uneasiness, making frequent vaginal examinations, but remained in the conviction that the tumor or tumors were the results of effusion in the broad ligaments, or else that an ovarian tumor was developing itself.

Quite puzzled by these symptoms, on August 30 I called in Dr. John S. Parry, who at once placed his ear upon the abdominal tumor, and, to my great surprise and confusion, detected a remarkably loud double-knock of a foetal heart, and an unusually loud placental bruit. Dr. Parry thereupon pronounced the case to be one of ordinary pregnancy, and thought that all the previous violent attacks had not been inflammatory, but hysterical. At that time he found the os uteri in its normal position, and concluded from the development of the womb that the woman was seven months gone. He accounted for the abortion in May by the theory that it was the casting off of the blighted ovum of a twin conception. After this discovery I quietly waited for the labor to take place, which I supposed would be about the middle of November at the farthest. Meantime she still suffered from violent attacks of pain, high

fever, and great debility. In these attacks I often carefully examined her, but could never find the os uteri, and therefore began to fear that something was wrong. On the 29th of November Mrs. K. accidentally ran violently against the corner of a table, receiving on her right side a very severe blow, after which she felt the movements of the child no more, although before this accident they had been unusually strong. Nor could I detect the foetal pulsations, which hitherto had been very distinct. About the middle of December, fully four weeks beyond the expected time of her delivery, her friends began to be clamorous to have me induce labor. This, however, I declined to do; but, finding that her strength and appetite were failing, and that she had bad night-sweats, on January 4, 1872, I again sent for Dr. Goodell. He found no foetal or placental sounds; but the vagina was now filled up by a large tumor, containing fluid, in which he thought he could feel the body of a foetus. Squeezing his whole hand in past this obstruction, with much difficulty, he discovered the long-lost os uteri, situated three inches above the superior aspect of the symphysis pubis. He at first deemed the case to be one of retroversion of the gravid womb, the fundus being bound down by adhesions; but at a second visit he decided that it was a case of extra-uterine foetation, and asked for additional counsel.

Accordingly, on January 15 Drs. Goodell and Parry met me. After placing the patient under ether,—which we did very reluctantly, because she was so weak,—a careful examination detected a large cyst or tumor occupying the pelvis and the Douglas cul-de-sac, soft and fluctuating as if filled with fluid. The os uteri was found high up above the pubes, as before stated, feeling like a puckered hole. The finger could be introduced as far as the second joint, but without touching any ovum. The vaginal portion of the cervix was entirely effaced; but the surrounding tissues, being neither soft, bulging, nor velvety, were utterly unlike those of pregnancy. The foetus could be detected through the walls of the abdomen, but not through the vagina. It was immovable under taxis, and very different in feeling from one contained in a uterus. In order to confirm the diagnosis—for a question of ovarian cyst had been raised—a long exploring-trocar was pushed into the vaginal tumor, and the fluid collected gave the unmistakable odor of liquor amnii.

It was proposed, in case my patient grew worse, to open the cyst and deliver the child by the vagina; but all operative interference was refused by herself and friends. The next day I was surprised to find her very much better; she was sitting up and talking with her friends most of the time. That night, however, she was full of pain, suffering, and restlessness, with a slight dribbling of the liquor amnii from the small puncture. From this time, as on many former occasions, she had constant pain, high fever, and great debility; until, worn out by her sufferings, she finally died on the 21st of January.

Fifteen hours after death the body was opened by Dr. Wm. G. Porter, in the presence of Drs. Harlow, Goodell, Parry, Jenks, and myself.

On exposing the cavity of the abdomen, an immense cyst, rather on the right side, was at once brought to view. It contained a very large quantity of liquor amnii, and a male foetus of full development, weighing about eight pounds. As the skin had begun to peel off from most of its body, it had evidently been dead for some weeks. The cyst was moderately adherent to the right abdominal wall, but closely attached to the pelvic and spinal tissues.

An enormous placenta lay near the right kidney, overlapping the spine. It was very closely adherent, and was much thickened by an old extravasation of blood. The bladder was flattened out by the great pressure to which it had been subjected. In front of the cyst and closely attached to it was the uterus, much enlarged; its mucous coat was much thickened and its cervix elongated. Each Fallopian tube was stretched out like a band, encircling the anterior aspect of the cyst; but neither of the ovaries could be discovered.

Remarks.—There is but little doubt in my mind that this was a case of ventral pregnancy, for an ovarian or a tubal pregnancy could hardly have attained to such a development. Also, that the supposed mole expelled on May 29, which led us astray for so long a time, quite

putting out of our minds the idea of pregnancy, was the decidual cast of the uterus, invariably formed and often thrown off during an extra-uterine foetation. She must have been four months gone at that time, and had, therefore, carried the foetus over twelve months when she died.

It seems quite likely that the extravasation of blood under and into the substance of the placenta was due to the fall upon the corner of the table on November 29, and that this had undoubtedly caused the death of the child.

The attacks of peritonitis, accompanied by so much pain and collapse, may very probably be traced to the irritation produced by this cyst in the peritoneal cavity, and to the stretching and rupture of some of the adhesions as it developed in size. In future, an unusually loud or very distinct placental bruit, or *very* distinct foetal heart-beats, would lead me to suspect extra-uterine foetation. So, also, would the condition of apparent retroversion of the gravid womb beyond the fourth month of gestation.

In vol. xii., London Obstetrical Transactions, page 331, Dr. J. Hall Davis describes a case of ventral pregnancy, eight months advanced, almost identical with mine. Here, the os was situated high above the pubes; and, deeming the case to be one of retroversion, that excellent accoucheur first attempted to replace the womb, and then, failing in this, introduced a tent, and also Barnes' dilators, in order to bring on labor. In this case, however, the cyst ruptured before death; but no correct diagnosis was made, and the extra-uterine foetation was only discovered at the autopsy.

Finally, were I to meet with an analogous case, I should not hesitate to recommend a vaginal incision into the cyst, and the delivery of the child *per vias naturales*, provided the woman's health had begun to suffer as my patient's had. If, however, the woman's health be not seriously impaired, it would be more prudent not to interfere; for there are many cases on record in which a foetus thus situated has been carried for very many years, without causing any disturbance whatever.

In conclusion, for much light thrown on the clinical history of this rare case, I wish here to acknowledge my indebtedness to an extremely interesting discussion at the Obstetrical Society of this city, to which I was courteously invited.

No. 6 South Thirty-seventh Street.

A CASE OF ACUTE IDIOPATHIC MENINGITIS.

SUSPECTED POISONING—POST-MORTEM EXAMINATION.

BY J. H. FISHBURN, M.D.,

Lock Haven, Clinton Co., Pa.

ON Saturday, January 6, 1872, I was called by Deputy U.S. Marshal Fowler to visit his son, who was lying sick at Renovo, Clinton County, Pennsylvania. I responded to the call, and on my arrival at his place of residence (Moyer's Hotel) found the following condition of affairs. Two physicians had been called at the beginning of the illness, but the father of the patient had discharged them, and subsequently called Dr. D. J. Reese, with whom I saw the patient.

Upon inquiry I learned that

The patient for some days previous (perhaps twelve or fourteen) had been complaining of headache. On the night of the 5th of January he retired at ten o'clock, complaining of severe headache and perverted or impaired vision. He was found at about three o'clock A.M. lying on the floor in an insensible condition, and perfectly nude; the room in flames from the upsetting of a lamp. On examination the arms were found to

be very much bruised, looking as if he had been striking them against objects in the room. There were also two marks on the back, about three inches apart, the upper one being about three inches below the scapula: one of them resembled an injury caused by a fall against some sharp obstacle, as the edge of the bed or a table; the other looked as if it was the result of a scratch by the nails, done in agony or distress. The injuries on the left arm at the elbow looked like those of a fall on a carpeted floor. There were no injuries to the head or any other part of the body, and nothing to indicate that violence had been done by any one but himself,—the evidence being that he had been in a state of violent delirium. His struggles awakened a lady who occupied a neighboring room. She immediately called the proprietor, who summoned medical aid. The physicians first called immediately bled him, but prescribed no medicine. The amount of blood taken was about twenty-four ounces.

The case then passed into the hands of Dr. Reese, who accepted it with great reluctance; but after having the circumstances fully explained to him, and learning that the patient was without medical care, he finally consented to take charge of him.

When he visited the patient he found him in a most violent delirium, it requiring four men to hold him in bed. Finding that medicine could not be administered by the mouth, he injected hypodermically one-tenth of a grain of sulphate of morphia, which immediately quieted him and caused him to pass into an easy and natural sleep, from which he awoke in an exhausted condition. This continued up to the time I first saw him. I found that his head was extremely hot, and that it had been so all through the attack. His pulse was thready, quick, and irritable, numbering 120 beats per minute. His breathing was quick, hurried, and sighing, the sighs almost approaching a groan, and indicating great distress. The pupil of the left eye was natural in size, but sluggish and showing no sensibility to light; the other one I could not examine, on account of the position of the patient. The sense of hearing seemed also to be destroyed. The forehead was covered with a perspiration, but it was neither profuse nor clammy. The right side of the body was paralyzed. Until as late as 8 P.M. of the 6th he had been unable to swallow anything, but at about this time he swallowed water when put in the mouth. The marks on his body seem to indicate that he had had convulsions before he was found.

He was reported by his employer to have lost a great deal of sleep; some of his associates informed me that he was quite frequently kept up until 4 A.M., and out at work again as early as 6. He was of perfectly temperate habits; his character was good, and he had never suffered from any disease.

Diagnosis.—From a consideration of the history of the case and of the present symptoms, I agreed with Dr. Reese in pronouncing it acute idiopathic meningitis, with probably a slight involvement of the cerebral structure. We believed that the attack had been gradually approaching, and at the time broke out as with a tumult. The cause we considered to be overwork and loss of sleep.

Our prognosis was unfavorable, and of this we informed the father at the time.

The only treatment that now suggested itself was blisters to the scalp and nucha, injections per rectum, and the use of the catheter, since the urine had not been voided since the onset of the disease.

At 5 P.M. of the 7th the case terminated fatally.

On the 8th I was informed that threats of poisoning had been made against our late patient, and that suspicious circumstances attended the case. I told his father that he could not have been poisoned, as the case bore no resemblance to one of poisoning. It came, however, under the notice of a German physician of this city, who urged the father to have an inquest held and a post-mortem examination made. I was accordingly summoned, and gave in my evidence, which was perfectly satisfactory as to the cause of death to all but one juror, who, under the promptings of this physician, propounded questions almost innumerable. This juror,

I suppose partly through curiosity and partly from prompting, insisted on further evidence, and also on a post-mortem examination.

The physician above alluded to was then called, and testified that the symptoms were those of suffocation, of morphia-, hyoscyamus-, alcohol-, or belladonna-poisoning, and that an autopsy would most likely verify his statement.

I then desired not only a post-mortem examination, but also that he should make it, assisted by Dr. T. W. Meckley and myself. This was done, with the following result: The cranium was opened; the dura mater was found natural; the vessels of the pia mater and arachnoid were engorged with dark blood—they were opaque in appearance. A deposit of lymph was found on the arachnoid. The brain was very slightly altered in consistence; the large vessels were engorged with blood; the ventricles were distended with serum, and there were evident marks of inflammation of the membranes. The doctor refused to proceed any further with the investigation, readily admitting that it was a case of acute idiopathic meningitis, caused by overwork and loss of sleep.

I then detailed the symptoms and post-mortem appearances of the poisons above mentioned, also those of suffocation; whereupon the jury rendered a verdict of "Death from natural causes."

VARIOLOID AFTER VACCINATION.

BY RICHARD A. CLEEMANN, M.D.

THE narration of the following case, of little value by itself, may, with other data, be of some use in estimating the amount of protection from variolous disease afforded by vaccination.

On October 20 of last year I vaccinated B., an Irish lad, 17 years of age, in two places, using the dissolved vaccine crust; both operations are recorded as successful. The boy came to my office on the 6th of January following, to show me some vesicles on his face, and with the following history: He had felt "sick" the previous Sunday (Dec. 31); during the next three days he had high fever and sweating, with pain in the head, but no backache or vomiting; on the second day subsequent—the day before his visit—the eruption in question first made its appearance. The vesicles were small, with the exception of one situated in a patch of acne about the middle of the cheek; this, without being umbilicated, presented the aspect of the majority of the vesicles found in varioloid about the third day of the eruption. There were on the left arm two depressed, reticulated scars, quite characteristic of successful vaccination, and still of a red color.

I called at the patient's residence January 9, to examine him more carefully. He was living in a house in dimensions twelve by fifteen feet, and three stories high, situated in a confined court,—each story forming but a single room. In this small dwelling were living five adults and one child, besides my patient; one of the men, then in the desquamative stage of confluent variolous disease, occupying the topmost chamber.

With the sick man my patient passed most of his time, remaining during whole nights in his room. On each side of the boy's face were to be seen half a dozen vesicles, mostly of small size, and one on the lobe of the left ear; there were none on the chest, but a few, which had been broken, on the abdomen, about a dozen on the back, two on the left arm, two on the left leg, and several on the outer side of each buttock,—one of the latter number being faintly umbilicated. Two days later, the vesicles were disappearing; some left red

papules behind them, the one which was umbilicated having this termination.

I think this case may be regarded as a very mild varioloid, contracted within three months of a successful vaccination, under circumstances of unusual exposure to the poison of variola.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

CLINIC OF PROFESSOR AGNEW.

Reported by Dr. ELLIOTT RICHARDSON.

HEMORRHOIDS.

PROF. AGNEW brought before the class a man 35 years of age, suffering from hemorrhoids of several years' standing. Latterly they had bled occasionally, but not enough to affect seriously the general health of the patient. They had given rise to pain, which was severe during defecation and for about half an hour afterwards, and had been the cause of so much discomfort as to induce the patient to seek relief by an operation. The lecturer called attention to the diagnostic value of pain in this affection, as distinguishing it from fissure of the anus, the pain of which becomes more severe after the act of defecation, often lasts for five or six hours, and is more intense than that which hemorrhoids ever give rise to. He also described the difference between external and internal hemorrhoids. The former consist principally of masses of skin and mucous membrane thickened by infiltration and cedematous swelling, and often containing coagula of blood. They are of a firm consistence, and can be removed by incision without much danger from hemorrhage. Internal hemorrhoids, on the other hand, consist of enlarged veins and arteries with thin walls, situated within the external sphincter, and are in reality aneurisms by anastomosis.

The causes of this affection may be such as are localized in the pelvis, drawing blood to the part, or such irregularities of the digestive apparatus as tend to produce congestion of the portal circulation, with which the hemorrhoidal veins are to a great extent connected. Among the former may be classed affections of the genito-urinary apparatus, and constipation. The absence of valves in these veins renders them peculiarly liable to assume a varicose condition.

On examination of the patient, a number of external hemorrhoids were seen, and in addition three little tumors of a dark-red color, situated just within the external sphincter. In the early stages of this affection, Prof. Agnew said, it can often be successfully treated by keeping the bowels regular, and by the use of cold affusions or of astringent and anodyne applications. When, however, the hemorrhoids come down frequently and are very troublesome and painful, an operation for their cure becomes advisable.

Of the methods recommended, two deserve consideration: ligation, and amputation while the tumor is firmly held in the grasp of a pair of forceps, hemorrhage being prevented by cauterization. Of these methods the lecturer preferred the former, on account of the danger from subsequent hemorrhage being less. The patient, having had his bowels evacuated previously, and the hemorrhoids made more prominent by sitting over a vessel of hot water, was etherized. The lower portion of the rectum was then everted, and one of the little tumors seized with a tenaculum and an incision made through the integuments at the point of junction of the skin and mucous membrane. This, Prof. Agnew said, was an important part of the operation, and neglect of it would subject the patient to much unnecessary pain, as well as cause delay on account of the greater amount of tissue included in the ligature. A needle threaded with a strong doubled ligature was then passed through the centre of the hemorrhoid at its base, the needle cut off, and one ligature brought around each half of the tumor in the groove of the incision and tied very tightly. This operation was repeated until all three were secured. They were then returned within the sphincter. A quarter of a grain of sulphate of morphia was given at once, and the patient

directed to be kept in bed for five or six days. During this time opiates were to be administered in sufficient quantities to secure rest and confine the bowels.

Within a week the ligatures would probably come away, and the bowels would then be evacuated by *ol. ricini* [3] every three hours until this effect was produced. Paralysis of the bladder for a time frequently follows this operation, rendering catheterization necessary.

The diet during this time may consist of animal broths, bread, butter, tea, and soft-boiled eggs.

The patient did very well, and left the ward Oct. 11, 1871.

VARICOCELE.

In the *Medical Times* for February 15 a case of this affection was reported, and the views entertained by Prof. Agnew upon the propriety of operative measures for its relief were therein stated. At the clinic held October 11 a young man 20 years of age was presented, in whom the pain and anxiety produced by this trouble were such as seemed to call for an operation.

The patient being etherized, subcutaneous ligation was performed. The *vas deferens* was carefully separated from the other constituents of the cord, and a long steel pin was then passed through the integuments between these and the *vas deferens*. A curved needle, threaded with a strong silk ligature doubled upon itself, was then passed in by the side of the pin, carried between the veins and the integuments, and brought out by the side of the pin on the opposite side. The loop of the ligature was then secured over the pin on one side, and tightly drawn and tied under it on the other, thus constricting the veins between the pin and the ligature. These the operator said might be allowed to remain for about six days, during which time the patient should be kept quiet in bed. In a week he might be allowed to walk about, wearing a suspensory bandage.

FATTY TUMOR OF NECK.

On the same day a man aged 57 years was exhibited, having a large growth situated on the right side of the neck, posterior to the sterno-cleido-mastoid muscle. The man had always been and was at this time in the enjoyment of good health, and had no history of hereditary disease. He stated that twenty-one years ago he had a boil on the neck, and that after the acute symptoms had subsided an indurated body remained, which had gradually developed into the tumor for which he now sought surgical treatment. The growth was nearly spherical in form, measured twenty inches in circumference, and was attached to the neck by a broad base. The tumor was firm and elastic, and the skin covering it normal in appearance. It had not at any time been the seat of pain, and was only inconvenient on account of its weight and bulk and the deformity which it produced. The progress of the growth had been at first very slow, but for the past two years had been as great as during any previous ten years.

Prof. Agnew said that, from its protracted growth, the healthy appearance of the skin over its surface, its firm and elastic feel, and the absence of pain and of any deterioration of the general health, the tumor was evidently a fatty growth, and all ideas of its malignancy must be excluded.

The Professor described the structure of these growths, and said that the fat which they contain does not differ from the ordinary fat of the body. Sometimes they are diffused, but usually are surrounded by a limiting membrane composed of connective tissue pressed together and thickened before the expansion of the fatty growth. This membrane is divided into two layers loosely attached to each other, one of which is firmly bound to the tumor, sending down prolongations into its substance and dividing it into lobules, and the other attached with equal firmness to the surrounding structures; so that in removing the tumor the first layer is removed with it, and the last remains in the wound. These growths are but slightly supplied with nerves,—hence the absence of pain in them,—and are sparingly furnished with blood-vessels. Their removal is therefore accomplished without much hemorrhage, except in cases where the tumor ramifies among important vessels and deep-seated structures.

The causes of these formations have not been clearly ascertained, though frequent or long-continued pressure and attrition seem sometimes to give rise to them. They are benign in

their nature, and only become serious by the mechanical obstruction which they sometimes offer to the performance of the functions of important organs in their vicinity and of the avocations of life.

No palliative treatment has yet been discovered, and removal by the knife is therefore the only resort. The patient was etherized, and two crescentic incisions were made meeting at the extremities, about two inches above the base of the tumor, which was then dissected out. Several ligatures were applied to cutaneous vessels, and the wound was closed by interrupted sutures and adhesive strips. Simple cerate was used as a temporary dressing, to be changed to laudanum and water in the course of forty-eight hours.

October 14.—Union by first intention has taken place throughout most of the wound. There has been but little swelling and redness, and the discharge is now very slight. Dry dressings are now being used.

October 25.—Nearly all the ligatures have come away, and nothing remains of the wound now but a narrow line of granulations.

JEFFERSON MEDICAL COLLEGE.

CLINIC OF PROF. JOS. PANCOAST.

Reported by FRANK WOODBURY.

EXCISION OF RIGHT HALF OF INFERIOR MAXILLARY BONE FOR CANCEROUS DISEASE.

ON January 7, Patrick Barrett, æt. 32, born in Ireland, appeared at the clinic of the Jefferson Medical College, with a large and painful tumor on the right side of the face and neck. This tumor is firm in consistence, rather irregular in shape, somewhat nodulated, and extends along the outer and inferior aspect of the body and part of the ramus of the inferior maxillary bone, to which it is firmly attached. It is about four inches in length and breadth, and extends from the ramus nearly to the symphysis of the jaw. He describes the pain as being constant, and of a burning, sometimes lancinating, character; is aggravated by motion of the jaw, and prevents his sleeping at night. He appears exhausted and anæmic. His history is as follows:

For many years he was a musician, and played a cornet in the British army. About eight years ago, while stationed at Malta, there appeared a chap or crack in his lower lip, about an inch from the angle on the right side. This would nearly heal, and then reopen on a slight strain, as in laughing. He thinks that it was irritated by the cornet. Two years after this first appearance of the sore he gave up playing the instrument, and became a laborer. When he resigned his position in the band he went to England, and after a year came to this country. During all this time, and for two years subsequent to his arrival here, the sore on the lip was persistent, breaking open and bleeding frequently; very much in the same condition that it had been in the five years previous. After having been two years in America, he noticed a hard lump at the seat of the wound, which slowly enlarged and ulcerated. This was pronounced cancer, and carefully removed a year afterwards by Dr. Price, of this city. About eight or nine months after the operation (or about six months ago) he noticed the enlargement of a gland below the lower jaw. As he had formerly been subject to an enlargement of the cervical glands, which soon subsided, he thought this of no consequence. This one, however, steadily increased, forming a movable tumor beneath the jaw, which, about two months before his appearance at the clinic, became firmly attached to the bone.

In December last he had typhoid fever. While recovering from this, he noticed that the gland enlarged more rapidly. Since then it has grown with greater speed and become excessively painful, the pain darting across the face in the direction of the nerve and through the body of the bone.

As he was still weak from the fever, Prof. Pancoast prescribed for him *tinct. ferri chlor.* and quinine, with a nourishing diet; and, as he was unable to sleep,

R. Chloral. hydrat., gr. xx
at night. Ordered to the hospital.

The lecturer remarked that the primary lesion in this case had been chronic ulcers of the mouth and lips, and that these

are apt to be developed into epithelial cancer. When the surgeon cut away the cancer by a V-shaped incision, he had perhaps not warned the patient that in case any of the lymphatic glands below the jaw became enlarged, and the enlargement could not be dissipated by the use of common liniments, they ought to be promptly removed, or they would take on the original disease, which would finally involve the lower jaw through its periosteum, following it down even into the sockets of the teeth. He stated that he could not too deeply impress the minds of his class with the absolute necessity, in these cases, not only at the time of the operation of removing any enlarged lymphatic glands at the base of the jaw, but also of warning the patient expressly of the liability of the disease to return in these glands.

On section of one of these glands in an advanced state of disease, we find them filled with a multitude of cancer-cells, which possess a self-proliferating power. These newly-formed cells spread in every direction,—even, through some as yet unexplained cause, directly contrary to the course of the absorbent vessels.

The causes of epithelioma are not well understood. It occurs more frequently in men than in women, the latter being more liable to scirrhus. Primarily it is a disease of the outer surface of the skin that forms the epithelium; hence its name. In its origin it is confined to the derma of the skin and mucous membranes, and most frequently occurs in the mouth, face, anus, and penis. It is more frequent in the lip, and especially the lower, than elsewhere. While confined to the skin its progress is generally slow, and in this stage a free application of chloride of zinc or simple excision of the surface will effect a cure. But when it attacks the subjacent tissues its action is more rapid, becoming in the course of time, to all intents and purposes, identical with scirrhus. In its subsequent course it forms an unhealthy, eroding, ulcerous tumor, discharging a thin acrid fluid of offensive character. This ulcer shows no disposition naturally to heal, but, on the contrary, steadily extends through all the adjacent tissues. When the disease reaches the periosteum there is no possibility of saving the bone or arresting the disease, save by excision of all the parts affected.

A slow but horrible death threatens our patient,—that of a large, painful, cancerous ulcer eating into the face and jaw, and discharging offensive fluids into the mouth which poison the breath, and find their way into the stomach with every mouthful of food; portions of the bone are discharged into the mouth, the constitution finally becomes undermined, and the patient sinks under the attendant suffering and exhaustion. The only means, and that a far from certain one, of averting this fearful result, is prompt excision of the diseased bone,—the necessity of which could possibly have been obviated had he applied for relief earlier, while the gland was yet unconnected with the periosteum of the lower jaw. This operation will be performed as soon as the patient is in a condition to bear it.

January 17.—The patient was brought in for operation. He has improved under treatment, and has been able to sleep at night with the aid of the chloral hydrate. The patient being in a sitting posture, ether was now administered to him as an anæsthetic. This position Prof. Pancoast prefers in operations on the mouth, as it allows ready egress to the blood and prevents its being swallowed. With the use of chloroform this position would be considered less safe. An incision was now made in the lip through the cicatrix of the previous operation down to the lower border of the jaw-bone, the canine and second incisor teeth drawn, and the bone sawed partly through and snapped with the bone-forceps. An incision was carried round the base of the tumor and behind the ramus of the jaw. The soft parts were then carefully separated from their attachments to the outer side of the tumor, up to the insertion of the temporal muscle, which was then severed. The inner face of the bone was then freed with the knife, and the bone, thrown into subluxation, was drawn forward and twisted round several times in its socket. The external pterygoid was divided at its insertion, and the remains of the capsular ligament cut with a Cooper's hernial bistoury. A few branches of the internal maxillary artery, connected with the muscles, were tied during the progress of the operation, which was completed with the loss of scarcely a wineglassful of blood.

The edges of the wound, both mucous and cutaneous, were approximated with silk sutures, and the carbolated oxide of zinc ointment applied, with adhesive straps and a supporting bandage. Some oozing, apparently from the pterygoid arteries, required the introduction of a piece of lint, wet with a weak solution of Monsel's salt, to the top of the wound.

January 24.—The patient came into the clinic-room, and reported himself relieved and comfortable. The wound was nearly healed, and he was doing well.

January 31.—Patient again presented. He sleeps well, has a good appetite, and is free from pain. Has not had a single untoward symptom since the operation, two weeks ago to-day. The wound is entirely healed, except at its lowest point, which has been kept open to afford a means of exit to the fluids. He is wearing a bandage to maintain the parts in apposition. He can open and shut his mouth, and has perfect power of mastication on left side.

February 9.—Discharged from the hospital to-day, cured within a month from the date of an operation which must be regarded as an important one, especially from the risk of wounding the internal maxillary artery, which is in immediate proximity to the neck of the jaw-bone.

CASE OF OZENA WITH CARIES OF MAXILLARY BONE.

This patient, a boy of 4 years, came before the clinic January 3, presenting the following appearance: His nose is much swollen, and pours out an offensive secretion; the mucous membrane of the inferior meatus and roof of mouth is tumefied, evidently due to subperiosteal effusion from diseased bone; tonsil glands enlarged and diseased; tongue furred; appetite poor; constipated; has had a tumid abdomen since he was eight months old. Is evidently laboring under a strumous taint of constitution.

Prof. Pancoast, with a small straight bistoury, punctured down to the bone, in several places, the thickened periosteum of the hard palate and the gums on either side of the teeth, liberating considerable serous pus. On the nasal process of the maxillary bone punctures were also made, to relieve the periosteal tumefaction. For constitutional treatment he ordered

R Hyd. chlor. mite, gr. j;

Rhei pulv., gr. ii;

Sodæ bicarb. exsic., gr. v. Misce.

to be given occasionally at night, to keep the bowels regular. Also a warm salt-bath every night. The diet to be good and nutritious. He directed the mouth to be washed out several times daily with an astringent bark lotion, and Thudichum's douche to be used night and morning, first with warm salt water and subsequently with a watery infusion of gum myrrh or cinchona bark, acidulating it slightly with muriatic acid.

The lecturer remarked that care must be taken in puncturing the mouth of a young child not to allow it to suck the blood. Feeling a warm fluid flowing in its mouth, it is very apt to suck, and the loss of blood is not suspected until, the stomach becoming overloaded, it vomits it up in considerable quantity. This accident may be prevented by holding a finger, or a pipe-stem, or a quill, in the mouth, so as to keep it from being a closed cup, until the bleeding stops.

January 13.—Patient was brought back immensely benefited. The punctures are repeated and treatment continued.

January 29.—Child so much improved as to be hardly recognizable. Although the patient is almost well, yet the punctures are repeated, to make "assurance doubly sure." A supporting treatment has been continued throughout: one grain of sulphate of quinia in an aromatic solution before meals, and three grains of the pyrophosphate of iron, made into a tablet with gum and sugar, after meals.

LARGE ULCER ON LEG FROM A BURN.

This patient, a man 26 years of age, has a large ugly ulcer on the anterior aspect of the leg, from knocking it against a stove. The surface of the ulcer is ragged and sloughing, and the parts around are congested and discolored and as hard almost as brawn. In order to relieve this state of things, and to induce a healthier state of the circulation in the soft parts around the ulcer, Prof. Pancoast resorted to his usual puncture-treatment of these cases. The brawny hardness of the parts depends upon the inflammatory thickening of the fascia, involving the

periosteum where the bone is superficial. A good number of punctures—ten, fifteen, or twenty—were made through all these parts in various places which were found soft, and down to the bone. This relieves the congestion, and probably also does good by equalizing the differing states of electric tension of the parts, which are arranged like Voltaic layers. The limb is ordered to be kept elevated, and surrounded with a roller bandage to be kept wetted with Goulard's extract and laudanum (3ij of each to water Oj). As he is constipated, he is directed to take three compound cathartic pills immediately, and a diaphoretic mixture at night is ordered.

EXTREME EXTERNAL STRABISMUS WITH SYMBLEPHARON.

James Chamberlain, æt. 47, from Lynchburg, Va., had a bank of earth to fall on him some time ago, and both eyes became filled with coarse sand. It was several days before this was all got away from between the lids. He had had for years external strabismus, in both eyes, of the third degree. Violent suppurative conjunctivitis set in, producing symblepharon in both eyes (union between the lids and the balls), and considerable opacity in the cornea of both eyes, greatest in the right. There was also on the right side ankyloblepharon for the outer half of the eyelids,—that is, union between the edges of the upper and lower lids. The patient says he was operated upon for strabismus twenty-seven years ago, without much success. The eyes are firmly fixed in the outer canthi, and so much covered by the lids as to be of little use.

Prof. Pancoast, after the administration of the anæsthetic, separated by dissection the conjunctival surfaces of the lid and globe, dividing the united edges of the lids of the right eye on a small grooved director. The right palpebral fissure being much shortened by the long-standing inflammation, he extended the incision out from the external canthus for the space of three-fourths of an inch; and to prevent reunion he introduced a short narrow flap of integument taken vertically from below, leaving a small pedicle at the temporal margin of the cut. This flap was partly rotated, and placed in the gap as a sort of wedge to keep the lids apart and make a new external canthus. This operation comes under the head of "blepharoplasty." The tendons of both external recti were then cut, and a fine ligature was passed with a needle through the stump of each tendon (before the tendon was cut), to serve as a sort of handle to each ball for drawing them towards each other. The strings were brought over the bridge of the nose and tied together, thus bringing the eyes into the state of internal strabismus. This was done in order to make the divided muscles re-attach themselves farther back on the ball, and counteract their tendency to reproduce the external squint which is apt to happen after they are reunited to the ball. The eye will not bear any foreign body introduced between the lids and the ball. Two fine stitches were passed through the integuments of both lids near their ciliary border, and again passed through the integuments just beyond the base of the lids, and the ends tied so as to keep the lids off from the ball. The light is directed to be rigidly excluded from the eyes by a bandage. A full anodyne was given, and the patient sent to bed.

January 6.—Patient brought before the class. The operation bids fair to be a successful one.

January 13.—Discharged. The external strabismus on the right side, where there was an opaque cornea, has not been entirely removed; but the balls move freely, and the left cornea holds the right position in the orbit. During the treatment it had been necessary to divide some new attachments between the lids and the ball. The patient sees well with the left eye, and will be able to resume his work.

GANGRENE PRODUCED BY DRESSINGS OF CARBOLIC ACID.—Dr. Tillaux reports, in *L'Abeille Médicale*, December 11, 1871, two cases in which gangrene followed the application of carbolic acid. In one of the cases the acid used was highly concentrated,—there being, in fact, at the bottom of the containing bottle a sediment of the solid acid. The acid in this condition was applied to slight wounds of the second and third fingers. It did not cause much pain, but the patient, noticing that his finger became black, ceased its use. Loss of the middle finger was the result.

FUNGI AS THE CAUSE OF MULTIPLE METASTATIC ABSCESSSES.—Von Recklinghausen says (*Centralblatt*, November 4, 1871) that hitherto many doubts have existed concerning the nature and origin of the multiple metastatic foci which are observed following different infectious diseases in the organs of the smaller as well as in those of the greater circulation, in the absence of simultaneous endocarditis.

As the most plausible, the theory of Virchow is generally accepted,—that they are produced by capillary emboli.

Von Recklinghausen has succeeded in discovering in an entire series of infectious diseases, especially in pyæmia and puerperal fever, further in typhus, acute articular rheumatism, finally in gangrene of the lungs and infiltration of urine, the cause of these small "abscesses" in *miliary accretions of small organisms*, which are termed micrococcus. The same are identical with the forms described by Buhl, Oertel, and Nussloff in diphtheritis, and by Klebs in cystitis and pyelonephritis; they can be distinguished with certainty from any substances belonging to the animal body or such as result from decomposition, as well by their appearance as by their great resistance against different chemical agents, even caustic alkalis.

Depositions of fungi were found by the author in preponderating frequency in the kidneys; at times quite recent without any manifestations of reaction, more frequently surrounded by a zone of hemorrhagic or pus-infiltrated tissues. Their accumulation is not limited to the blood-vessels, among which the smallest veins contain the most abundant masses; but Recklinghausen found them in Bowman's capsules and in the uriniferous tubules: washed out from the latter they can be found in the contents of the bladder, either during life or after death. The distention of these various canals is often so great that there is a marked nodular swelling of the same, sometimes even causing perforation and escape of the masses of fungi.

The author discovered in a case of scarlatina a further fungus-form, in every respect different from the micrococcus, consisting of nodular masses of a green color forming small abscesses in the renal pyramids. The urine of the patient, who expired upon the sixth day, contained cylinders that were covered with similar elements.

The frequency with which these different fungi-formations are found, especially in the kidneys and the urine, as well as the extent and the multiplicity of their appearance, is, according to the opinion of the author, one of the most significant indications of the localization of these problematical germs in infectious diseases generally.

These fungi-metastases cannot be regarded as emboli in the sense of Virchow, such a view being untenable when we consider the frequent extravascular position of the scattered material,—also proven by Recklinghausen to exist in the alveoli of the lungs,—and especially the circumstance that in a great number of closely-examined cases a simultaneous endocarditis was never present. The slight deposits which may be found upon the mitral valve are to be regarded with the greatest probability as metastatic, in the same sense as the abscesses in the other organs.

ON THE RELATIVE EFFICACY OF TINCTURE OF HYOSCYAMUS, BROMIDE OF POTASSIUM, AND CHLORAL, IN SINGLE DOSES, ON MANIACAL EXCITEMENT.—Dr. John A. Campbell, at the close of a paper contributed to *The Journal of Mental Science*, January, 1872, states the following as the results of numerous experiments with these drugs: 1. That both chloral and tincture of hyoscyamus are sure sedatives to maniacal excitement; 2. That of these two medicines chloral is the more certain sleep-producer; 3. That chloral acts more quickly than tincture of hyoscyamus; 4. That, though bromide of potassium in such doses is a sedative to maniacal excitement, and to a certain extent an hypnotic, yet it is not a sufficiently powerful sedative to allay intense excitement, or an hypnotic to compel sleep where great insomnia exists; 5. That a two-drachm dose of tincture of hyoscyamus is not equivalent to thirty grains of chloral; two and a half drachms would probably be as nearly an equivalent as could be given. From the different sedative and soporific power of bromide of potassium, one can hardly form an idea of an equivalent dose. It appears to be useful only where the excitement or insomnia is of a slight character.

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EDITORIAL.

THE COLLEGE TERM.

ONLY four months and a half have passed since we announced the beginning of the regular course of lectures for the session of 1871-72 in the medical schools of this city; but, short as the time is, the session is already over, and before this number of our journal reaches our subscribers the medical department of the University of Pennsylvania and the Jefferson Medical College, in common with most of the other medical schools of the country, will have held their annual commencements and conferred their highest honors upon the graduating classes. These, we are glad to hear, are likely to be large; and it is gratifying to find that, in spite of the fear of the epidemic of smallpox which has prevailed during the winter, and which has doubtless deterred many aspirants for medical honors from coming here, the number of students in Philadelphia during the past few months has been nearly, if not quite, up to the average.

With a full sense of what our colleges have latterly done to elevate the standard of medical education and to afford their students increased opportunities for becoming familiar clinically with disease, we venture to express the hope that the time is not far distant when the sessions of the medical schools will be either twice as long, or, what would be better, when there will be two sessions in the year, of five months each. At present the exigencies of American life seem to require that students shall undergo a process of cramming during a little more than four months, while during the rest of the year they are free to study or not, as their inclination may dictate. It is true that during the spring and fall the winter instruction is supplemented by admirable courses of lectures of a practical character, and that those which are given in this city are especially excellent. It is true also that everything is done to influence students to attend these courses, and that it can no longer be said with truth that there are no inducements to remain in Philadelphia during the summer. The fact remains, however, that attendance upon any but the regular course is not requisite for obtaining a degree, and that, up to this time at least, the number of students who do avail themselves of the advantages of the summer sessions is comparatively

small; the large majority returning, as heretofore, to their own homes early in March, and remaining there until the middle of October.

During the long vacation the students are in many cases left without guides as to the books they shall read, or as to the manner in which they shall employ their time to the greatest advantage. Those who are ambitious will probably spend their time in reading; but the knowledge gained in this way is not usually practical,—an element in which the regular courses of lectures, in spite of the improvements which have been recently made, are still deficient. A very few may be fortunate enough to have preceptors able and willing to impart instruction to them at the bedsides of their patients; but even in this case—and it is of infrequent occurrence—the field of observation is contracted, and not comparable to that afforded by a hospital or clinic.

Besides the disadvantages of leaving the student without settled occupation during a large portion of the year, the present arrangement of the lectures is objectionable, because during the remainder it overworks his mind and body to an alarming extent. At a time when American laborers are clamoring for an eight-hour law, it seems unaccountable that the professors of medical schools—men, too, who have made or profess to have made the preservation of bodily and mental health a study—should expect young men, whose minds and bodies are in many cases not fully developed, besides attending six or seven lectures and a clinic daily, to dissect during two or three hours in the evening and to read on the subject of the lectures whenever an unengaged hour presents itself. We think it would not be difficult to prove that the average mind is incapable of fully digesting and appropriating the matter of more than three lectures a day; while the defects of a system which ignores the necessity of exercise at a time of life when full bodily development has not been attained must be apparent to every one. While opportunities for exercise are wanting in the life which the student is compelled to lead, great bodily fatigue is, on the other hand, caused by the necessity for sitting for so many hours upon hard benches in constrained and uncomfortable positions; and the almost constant confinement in close and ill-ventilated rooms can scarcely be without a prejudicial effect upon his general health.

The changes recently introduced into the curriculum of the medical department of Harvard University are certainly good as far as they go. They render necessary an attendance upon lectures during three years instead of two, as at all other medical colleges in the United States; but during each year only a partial course of study is to be required, and the student is to be examined at the close of each term upon the subject of the lectures he has attended. This is, we think, a great improvement upon the old plan, by which he is obliged to listen during the second year to precisely the same lectures that he heard during the first. The term has been, moreover, increased in length. This is a step in the right direction, because it accomplishes the object which is so essential: that is, to dis-

tribute over a larger part of the year the course of instruction necessary to the obtaining of a degree.

The effort which is now being made by the University and Jefferson College to have hospitals attached to them, so that clinical teaching shall not be, as it is now, an appendage to the regular course of instruction, but an essential part of it, cannot be too highly commended. It is a project in which every alumnus of either school who values his diploma should feel an interest, and towards which we feel sure many will be glad to contribute. We are beginning to recognize the fact that our schools are deficient in this clinical element, and that practical knowledge is to be acquired at the bedside which can never be obtained from didactic lectures, no matter how excellent these may be.

We hope that students will soon be admitted to our hospitals as clinical clerks and dressers, as in England and in other countries. There is a vast amount to be learned from the performance of duties which the attending and resident physicians are too much occupied to attend to, and which are not unfrequently left to the nurses. The experience gained in this way fits the physician for more responsible hospital positions later, so that this would be an innovation upon established practice which would redound quite as much to the advantage of the patients as to that of the students.

THE SUMMER COURSES OF LECTURES.

INASMUCH as the great advantage of attending these courses was very fully dwelt upon in an editorial in the corresponding number of this journal for last year, and incidentally alluded to in the preceding editorial, it is not necessary for us at this time to do more than to call the attention of students and their preceptors to the fact that the usual lectures will be delivered during the months of April, March, June, and September, at the University of Pennsylvania and at the Jefferson Medical College. These lectures are of a practical character, and the lecturers, although many of them young men, are well-known and successful teachers. During the same months, clinical instruction, both public and private, will be given at the various hospitals of the city, all of which are of easy access from the two schools. In this connection it affords us great pleasure to refer to the course on Medical Diagnosis, to be given by Dr. Wm. Pepper, late editor of this journal, in the wards of the Philadelphia Hospital. The clinical material at the disposal of Dr. Pepper is abundant, and he has had many years' experience in teaching at the bedside.

The introductory to the seventh annual course of lectures of the Auxiliary Faculty of Medicine of the University of Pennsylvania will be delivered by Harrison Allen, M.D., at the hall of the University, March 25, 1872, at one o'clock. The subject of the lecture will be "The Analysis of the Animal Form in Art."

The general introductory to the summer course of lectures at the Jefferson Medical College will be de-

livered by Dr. F. H. Getchell, on Monday, April 1, 1872, at twelve o'clock. The subject of the lecture has not yet been announced.

THE type-setter left out a few words in our editorial comments upon Dr. Stephen Smith's note, and unfortunately we did not detect the omission when reading the proofs. In the original manuscript, after the words "50 per cent." in line seven of the comments, the words "of 36 per cent." were inserted. The sentence would then read, "We think it but right to add that a reference to Dr. Ashhurst's letter, in the number for December 15, 1871, shows that he has not denied, but has, on the contrary, expressly affirmed, that 18 per cent. is half of, or 50 per cent. of, 36 per cent.; and that it is less than 36 per cent. by 50 per cent. of 36 per cent., which is equivalent," etc.

TRANSLATIONS.

PAIN AND DISTURBANCES OF CUTANEOUS SENSIBILITY.

A CONTRIBUTION TO THE PATHOLOGY OF NEURALGIA.

BY DR. H. NOTHNAGEL,

Docent in the University of Breslau.

Translated by WM. C. KLOMAN, M.D., of Baltimore.

From *Virchow's Archiv*, vol. liv.

AS simple and certain as is the diagnosis of neuralgia in typical cases, in the classic form of *tic douloureux*, or in the distinctly-marked picture of the *malum cotunnii*,* just so difficult is it to say in other cases whether we have before us a rheumatism, an inflammatory affection, or a so-called neuralgia. The main difficulty in deciding this question is evidently whether, in recognizing this disease neuralgia, we are obliged to rely upon purely subjective symptoms. For unquestionably diagnosis becomes so much the more certain, the greater the amount of objective signs, accessible to perception by the senses, upon which it can be based. Türck's communication, "To the Doctrine of Hyperæsthesia and Anæsthesia,"† was of importance in this connection. As is known, this author stated that in neuralgia there at times exists a hyperæsthesia, but still more frequently an anæsthesia, of the cutaneous surface, corresponding to the location of the deeper-seated pains.

Herewith there was given at least one symptom of disease, which, although not directly perceptible to the senses, was yet accessible to external investigation, and so much the more valuable as the frequently-mentioned tender points of Valleix‡ have lately more and more fallen into discredit. Meanwhile its importance was injured by Türck, who declared that this existence of hyperæsthesia and anæsthesia was certainly frequent, but not constant; still more by his demonstrating that there was no causal connection whatever between them. Hence it has probably occurred that this interesting fact has hitherto occupied no special place in the pathology of neuralgia; authors like Romberg and Hasse treat it as nominally interesting, yet of secondary importance; and in the most recent treatises on neuralgia it has the same fate. So far as I know, the only investigator who attributes a greater importance to this subject is Traube. Yet his statement in reference

* Sciatica.—Note by translator.

† *Wiener Zeitschrift*, vi., 11 and 12, 1850.

‡ Points where the nerve lies superficially, passing out of foramina in bone, across bony surfaces, through aponeurotic or muscular gaps, or where large cutaneous nerves anastomose in their ramifications. Pressure on these points was said by Valleix to be painful and diagnostic of neuralgia.—Note by translator.

to this appears to have remained very much unnoticed. Traube, at the place referred to,* makes the following statement: that in all the cases investigated by him "the hyperæsthesia or analgesia could be demonstrated, even in the intervals of freedom from pain, indifferently whether the neuralgia was of central or peripheral origin."

During some years past I have investigated all the cases of neuralgia which have come before me, in reference to cutaneous sensibility; and in the following pages I will speak of the results to which I have attained. In doing so I will abstain from communicating in detail the histories of the cases; this appears to me unnecessary, as the array of symptoms presented by neuralgia is so simple and clear, and an enumeration of them would contribute more to the fatigue of the reader than to an elucidation of the question.

It is to be remarked at the beginning that all painful affections of internal organs, which arise with the character of neuralgia and are designated as such, are excluded from the investigation. Only the neuralgias of the nerves of the extremities, and of the superficial nerves of the trunk and head, are taken into consideration. Of these, however, the most various tracts have come under observation. I mention the first and second branch of the trigeminus, the occipitalis, the supra-clavicular, intercostal, and cutaneous nerves of the abdomen, the individual branches of the brachial, lumbar, and sacral plexuses. The sum-total of the cases amounts to perhaps seventy; I cannot state it more precisely, as I no longer possess the notes of several.

In these cases the causes were just as various as the locations. In order to arrive at more reliable conclusions, I have endeavored as much as was possible to exclude those forms in which a central affection lay at the foundation of the neuralgia. For what deductions can be made from disturbances of sensibility, or from the relation between hyperæsthesia and anæsthesia, if a cerebral tumor or an affection of the spinal cord produces a peripheral neuralgia? The same obtains of hysteria, of the disturbances of sensibility in epilepsy, of all forms of disease which Türck has excluded from the range of his investigations. For the same reason I have eliminated the cases in which there was a demonstrable anatomical lesion of a peripheral nerve,—wounds, compression, and the like. Accordingly, there remain for consideration, in the first place, the majority of the cases which (correctly or incorrectly) could be traced directly to taking cold; next the questionable cases of neuritis with neuralgic phenomena; then those most applicable to the present question, cases of so-called irradiated neuralgia (for example, in the intercostal nerves in ulcus ventriculi); and, finally, the neuralgias of malarial poisoning, in the commencement of typhus† and similar forms of disease.

In the neuralgias mentioned, besides the spontaneous pains, I could, entirely in accordance with the statements of Traube, constantly and without exception establish an alteration of the cutaneous sensibility, either a hyperæsthesia—or, more correctly, a hyperalgesia—or an anæsthesia. And indeed it proved to be the rule that these disturbances, with but few exceptions, exist in a constant and definite relation to the period of the duration of the neuralgia,—at its commencement, cutaneous hyperalgesia; upon longer continuance, diminution of sensibility. The details concerning this are given below.

* *Gesammelte Beiträge*, Bd. ii. S. 545.

† An observation may appropriately find place here. It is a well-known fact that not at all unfrequently hyperæsthesia of a neuralgic character and anæsthesia may arise in the course of the distribution of nerves, in the convalescence of and as a sequel to typhus. I myself have had the opportunity of seeing a considerable number of such cases since the late war. On the other hand, another fact appears to me to be less noticed,—namely, that *neuralgia may arise quite in the beginning, in the first week of ilio-typhus*. Of course, cutaneous hyperalgesia, diffused either over the entire body or its greater part or over the lower extremities, combined with active spontaneous pains in the first week of typhus, has already been described. I do not mean these conditions, but the so-called genuine neuralgia, limited to the distribution of a single nerve or nerve-twig, precisely as in malarial poisoning of the same stereotyped character. As is known, it is also observed in the beginning of other acute so-called infectious diseases,—for example, in the prodromatory stage of variola. A knowledge of some of these neuralgias is of therapeutic importance, especially that affecting the region of the supraorbital and occipital nerves. In three cases I observed that, at the end of the first and in the commencement of the second week of typhus, the patients with high fever complained of very severe pain in the head, against which the most energetic applications of ice produced no results. A more exact examination demonstrated an occipital or supraorbital neuralgia; a blister was applied, and the pain disappeared.

The various qualities of the sense of touch were tested in the investigation. The sensitiveness to pricks of a needle and to changes of temperature was ascertained in all cases, without exception; and in many cases also the sense of pressure, the distance which it was necessary to separate the sharp points of the compass before they produced distinct impressions, and the sensitiveness to the electric current.

The hyperæsthesia first of all manifests itself in this way: impressions of touch of the same strength are perceived much more vividly upon the affected side than upon the healthy one,—frequently to such an extent that very slight needle-pricks cause pain, and contact with a metallic substance of the temperature of the room may call forth general chills. A more accurate investigation, however, teaches us that there is no actual hyperæsthesia,—no increased power to distinguish slight differences in sensation.

I have already upon a former occasion‡ stated that an exaltation of the sense of temperature does not occur, or, in other words, that there is no increase of ability to distinguish differences of temperature. The same obtains of the test of the "absolute" cutaneous sensibility by means of the induction-current after the method proposed by Leyden, which was practised as well during an attack as in the intervals of freedom from pain. Finally, the same is true of the distance of the points of the compass. From this it follows that we must admit a hyperalgesia. Further below we will see that this agrees very well with the explanation which we must give of the condition under consideration.

Türck has already stated of anæsthesia that it may occur in various degrees. It is sometimes of very high degree, especially in old and inveterate neuralgias; and certainly cases of this kind constitute a portion of the group of morbid conditions described as anæsthesia dolorosa. In the great majority of cases, however, we observe only a slight difference in the acuteness of sensation. I emphatically remark that the differences not unfrequently appear only upon careful testing; that one must not push the needle vigorously into the patient's flesh and then ask whether he feels. In the lesser degrees of anæsthesia the patients feel everything, even slight needle-pricks and light touches, but the sensation is decidedly more blunt than upon the healthy side; for example, they mistake the needle's point for its head. Their answers, however, follow with uniform precision, and patients who had no idea of the purpose of the investigation, and whose faculty of observation has not been well educated, are yet immediately struck by the difference. The sense of temperature is weakened, the ability to distinguish variations is lessened; I have likewise found the sense of pressure impaired, as also the electric sensibility. Concerning the test of applying the points of a compass, it has been ascertained that in very slight disturbances of sensibility there is no demonstrable abnormality, but that in a somewhat more marked anæsthesia the points of the compass must be moved farther apart in order to be distinguished as two.

I have dwelt a moment longer upon this point, because these slight disturbances of sensibility are so readily overlooked and are yet so important for the settlement of the question at issue. The diminution of all the qualities of the sense of touch exists in a much more considerable measure in anæsthesia of higher degree, in which deep needle-pricks, burning, etc. are not at all felt. I expressly remark that, so far as my observations reach, *partial paralyses of sensation do not occur in this form of anæsthesia*.

The disturbance of cutaneous insensibility stands in a relation varying as to its seat with the extent of the spontaneous pains. We often see that it accurately corresponds to the cutaneous distribution of the nerve-branch or nerve-trunk to which the pain is referred; thus, at the outer and inner side of the thigh we can at times draw an almost straight line which bounds the anæsthetic zone upon the posterior surface from the zone of normal sensation upon the anterior surface, when we are dealing with a case of sciatica. Just as often, however, the exceedingly remarkable fact exists that *with a neuralgia of a nerve-branch or nerve-trunk quite limited in extent, the cutaneous hyperæsthesia or anæsthesia appears to extend over*

‡ *Zur Physiologie und Pathologie des Temperatursinns, Deutsches Archiv f. Klin. Med.*, Band ii. S. 294.

the whole of the corresponding half of the body,—a fact to which Türck has already called attention, and which I can fully confirm.

I have already pointed out that the cutaneous dysæsthesia stands in a constant and determined relation to the duration of the neuralgia, and, indeed, in such a manner that in the beginning we find hyperalgesia, and subsequently anæsthesia. From the material lying before me, I must draw the conclusion that in the first two to eight weeks an increased sensibility of the skin exists; then in the after-course the anæsthesia is developed. In vital processes of this kind naturally no mathematically-accurate statement of figures can be made, but only an approximate estimate. Only it appears that herein the intensity of the spontaneous pains is of importance; that the greater this is, the sooner is the anæsthesia developed. Yet a greater amount of statistics is needed for the decision of this question.

I must of course remark that I have seen a deviation from this constant relation in some cases; yet these form but a small fragment of the sum-total. Thus, it only once happened to me to find a diminution of cutaneous sensibility so soon as the fourth day of its existence, in a recent decided case of supraorbital neuralgia; but in this case the pains were so intense that the patient, a very robust, hardy laborer, had to give up his employment and immediately seek medical aid. I several times found the reverse relation,—that hyperalgesia still existed when the neuralgia had lasted a couple of months. The frequently-cited case of Lentin evidently belongs to this category. Yet, as has been said, these are exceptions. The rule is—a recent neuralgia, cutaneous hyperalgesia; an older one, anæsthesia. Traube, among his observations, also adduces one (l. c. 3 Observ.) in which the cutaneous hyperalgesia existing at the beginning afterwards gave way to anæsthesia.

We must touch upon another point in reference to the relation as to time, which is not unimportant for explaining the phenomena under consideration. Although in many cases of neuralgia the pains do not present the distinctive property which is regarded as characteristic of them,—that is, their occurrence in paroxysms, with entirely free intervals (for very often, besides the severe attacks, we still find continuous—not indeed acute, but always perceptible—painful sensations),—yet there is always a series of cases in which the patients are quite free from spontaneous pains in the intervals. But the hyperæsthesia of the skin not only exists during the paroxysms, but also in the intervals of freedom from pain,—of course not to the same extent as during an attack; and, conversely, if once the anæsthesia is developed, the diminution of cutaneous sensibility can also be demonstrated during the spontaneous pains.

If the neuralgia passes into simple pain, I have also seen the abnormality of the cutaneous sensibility disappear in a longer or shorter time after the disappearance of the pain.

We may regard the phenomena described as constant accompaniments of the already-known array of symptoms of neuralgia. Their diagnostic application is somewhat diminished by the circumstance that the disturbance of cutaneous sensibility does not generally remain limited to the distribution of the diseased nerve, but extends to the distributions of other nerves, at least in neuralgias of any severity.

But another point demands consideration. It is of importance to test the sensibility of the skin, not only in persons affected with neuralgic pains, but also with any kind of pain caused by the most varied affections. It is known that, besides the spontaneous pains, there exists a hyperalgesia to external impressions in inflammations, which affects the skin or implicates it secondarily, and by which it is reddened. The fact has also long since been known, for example, in acute pleuritis with acute pains, that there is a considerable cutaneous hyperalgesia. These facts, moreover, do not stand alone. In many cases of severe pain in which there certainly was no so-called neuralgia, and in which also there was no ground for assuming a participation of the skin in the morbid process, I have been able to prove an alteration of the cutaneous sensibility. In these cases the question was about any kind of pain-exciting processes, provided only that they had their seat in the distribution of a nerve from which branches, not themselves affected by the morbid process, proceed to the cutaneous

surface. As in neuralgia, here also a definite relation could be demonstrated to the period of the duration of the pain: in recent cases there was hyperalgesia; in those of longer duration, diminution of sensibility.

The cases investigated were of the most varied kind: decided articular and muscular rheumatism (with originally inflammatory tumefaction of the joints), pain from fractures, traumatic articular inflammations, etc. In these cases, as in neuralgia, the disturbances of sensibility often are not limited to the immediate surroundings of the place affected, but not unfrequently extend over the entire extremity, much farther than the spontaneous pains. Indeed, we can sometimes here also prove that the hyperæsthesia or anæsthesia occupies the whole corresponding half of the body.

As in neuralgia, I have also missed finding the principal disturbances when an organ lying in the deeper parts of one of the large cavities of the body was affected by painful disease.

As points of difference between the two, I must, however, announce in the first place that I have never, under these circumstances, met with anæsthesia of so high a degree as we sometimes find it in neuralgia; we always find only slight alterations of the acuteness of sensation. And then, even when the punctum dolens lies within the region of a nerve-trunk supplying also the skin, the same constancy does not in this instance prevail as in neuralgia; according to my observations, the presence and the degree of the disturbance of cutaneous sensibility stand in exact relation to the intensity of the pain.

From what has just been stated, the fact may be deduced that not only, as Türck assumed, does cutaneous hyperæsthesia or anæsthesia occur in neuralgia, but that the same may also occur with any deep-seated pain from other causes.

So much for the facts. Let us now turn to the question, How may the phenomena just described, especially the coincidence of deep-seated hyperæsthesia with anæsthesia of the surface, be explained? Türck arrives at the conclusion that we must seek an explanation in the central organs. Meanwhile, he gives us no statements as to what actually takes place in the central organs; again, he passes over the discussion of the question whether the explanation should not be sought in a particular relation of the nerve-trunk,—he is rather occupied with the peripheral terminal distribution of the nerves and with the central organs. Finally, the question arises whether Türck's proposition is tenable at the present day, when our knowledge of the relevant facts, as well as our physiological views, since the time in which Türck wrote, has become so much more extended.

Starting out originally with the assumption that the disturbances of cutaneous sensibility exist in neuralgia, I at first believed that the conditions peculiar to neuralgia played a rôle in the explanation. When, however, it was shown that an analogous relation, quite independent of neuralgia, may occur in pain from quite different causes, the question became more general, and, as it appears to me, the explanation more simple.

I am of the opinion that the pain as such—the physiological process in the perception of pain—causes the changes of cutaneous sensibility: the hyperæsthesia as well as the anæsthesia.

The assumption would indeed not be far-fetched, that certain anatomical changes exist at some point of the course of the nerves or at their central or peripheral terminations, and that the disturbances of cutaneous sensibility depend upon these. I will presently recur to the fact that such changes must of course be taken into consideration in individual cases; still, cases of this sort are far from constituting the majority, and, in my opinion, the anatomical alteration is superadded in them only as a sustaining force to the cause producing the pathological sensitiveness of the skin, which lies in the physiological act of the perception of pain.

It is certainly true that, wherever a neuralgia has been produced by some pressure upon a nerve-trunk or other lesion of the same, furthermore in cases of excentric neuralgias dependent upon anatomical changes in the central organs, we must regard the interruption of conduction as the main cause of the anæsthesia; but I have excluded cases of this sort from the discussion, on that account. I have also left out of consideration the cases in which there existed decided vasomotor phenomena; if we are dealing with a spasm of the

arteries, this may by itself diminish the cutaneous sensibility.* It is also possible that anatomical relations occur in neuritis which influence the conducting power; still, in the first place we know nothing certain concerning these, and then we are not sufficiently acquainted with the relation of "neuralgia" to neuritis.

But what anatomical changes shall we assume to occur in neuralgia, and especially the so-called "irradiated" form, as the expression of a malarial infection? According to my judgment, we must seek the cause of the disturbance of cutaneous sensibility in the physiological process of the perception of pain. This is common to all neuralgias; it also exists in painful affections from any other cause. And it appears to me proper to seek, whenever possible, a common cause for similar effects.

Let us now examine in what way the pain can lead to a diminution or an increase of cutaneous sensibility.

In order to proceed entirely in order, we may seek the causes of an anæsthesia or a hyperæsthesia in an irregularity either of the peripheral terminations of the nerves, or in one of the nerve-trunks, or of the central ganglion-cells, or finally in two of these localities simultaneously.

That there are neuralgias which have their seat, at least primarily, in the *nervous ramifications of the skin*, does not in itself appear improbable; Traube (loc. cit.) has given the reasons which favor an assumption of this kind. Now, in such cases it is also imaginable that definite anatomical alterations of the cutaneous nerves and their final terminations exist, which modify the reception of sensitive impressions in such a manner that, besides the spontaneous pains, primarily a hyperæsthesia, subsequently an anæsthesia of the skin, shows itself to external impressions.

But this form of neuralgia constitutes only a limited portion of the sum-total. In another series of cases there is no doubt that an affection of the trunk or of the central organs exists. Up to this time, at least, we have no proof whatever that the nervous terminations are affected in the malarial or irradiated neuralgias. We may even suppose that this may take place secondarily. But, apart from the absence of all direct investigation, what analogies shall we make after the results to which Langerhans† has attained, who, in cases of anatomical lesions of the highest degree in the brain and spinal marrow, could never find a secondary degeneration of the textile bodies? And furthermore,—and this is one of the main points,—if the disturbances of cutaneous sensibility were caused by an affection of a purely functional nature in the nerve-terminations, they could always exist only in the region of the diseased nerve,—i.e. corresponding to the diffusion of the pain.

In regard to the *nerve-trunks*, I have already shown that only in rare cases can we likewise assume an anatomical lesion of these. On the other hand, the question has been agitated for a long time whether the causes of the disturbance of cutaneous sensibility were not to be sought in the trunks, and, indeed, in a functional disturbance of them, which would present itself as a diminished resistance to conduction in hyperæsthesia, as an increased resistance in anæsthesia.

When a nervous tract is the seat of neuralgia, and consequently the seat of pain, the anatomical cause of which must be considered to be the peripheral nervous tract and not the central organ itself, then these fibres are decidedly in a condition of activity, for they conduct the sensitive impressions to the brain. The intensity of the activity is obviously directly proportional to the intensity of the pain. Now, we know of other organs that a relaxation sets in after considerable functional activity, or after the effects of strong and severe irritation,—as in muscle, in the retina, in the motor nerve-fibres. It might, indeed, also be thought that in an analogous way a nerve-trunk affected with neuralgia must become fatigued, since it must conduct frequently-repeated and strong irritating impressions. This fatigue may still permit the impressions of severe pain produced by neuralgia to be conducted, but not the slight tactile impressions which we use in investigation.

In order to test the correctness of this conjecture, I have instituted a series of experiments, in which, by the long-continued energetic irritation of a nerve-trunk (I chose the median), I endeavored to produce fatigue of it. The results to which I have attained are nevertheless not convincing, and for that reason I omit all details concerning them.

The following consideration was subsequently proposed: if the diminution of cutaneous sensibility is actually the consequence of fatigue of the nerve-trunk, which prevents it from conducting all but powerful peripheral impressions, then it will probably also conduct impressions more slowly than in health. I examined a series of patients in reference to this, but have never observed a decided indication of a retarded sensitive conduction, as Cruveilhier, Leyden, and others described it under other circumstances. The tests were quite simple, undertaken without apparatus, and, as in this instance not the slightest difference in the rapidity of perception was shown between the healthy and the diseased side, I regarded it as unnecessary to make use of time-measurements as to the rapidity of conduction, always so difficult of application in patients of little intellectual cultivation.

It is indeed evident, without further reasoning, that the assumption in question of a fatigue of the nerve-trunk would furthermore explain the often diffused extent of the disturbance of sensibility just as little as would the transfer of the seat of the anæsthesia to the peripheral termination of the nerves.

To these grounds is added yet another, which makes the assumption of increased resistance in the nerve-trunk itself appear untenable. Bernstein, in his late publication, "Investigations on the Exciting Process in the Nervous and Muscular Systems," comes to the conclusion that the wave of irritation is conveyed onward in the nerve-fibre without loss of vital force, and that the nerve-fibre simply conducts the irritation without participating actively in it. Accordingly, we may assume that, if an excitement of a certain intensity is once transferred from the recipient terminal apparatus to the fibre, it will also be conveyed onward in this latter (provided of course there exists no mechanical interruption of the continuity) in the same intensity; no enfeebling of the sensible irritation would consequently be caused in the process of conduction in the nerve-fibre.

If, therefore, as I believe, it has been proved that the cause and the seat of the disturbances of cutaneous sensibility are to be sought in the peripheral terminal organs in only a certain proportion of the cases, and never in the nerve-trunks, then by the process of exclusion we arrive at the conclusion that in the remainder of the cases we must assume them to be in the central apparatus, in the ganglion-cells.

In fact, all the phenomena indicate as more probable that we must seek in the central ganglion-cells the changes which cause the anæsthesia and hyperæsthesia of the skin in neuralgic and other pains.

But of what nature are these changes? That they cannot be of a gross anatomical nature is manifest; at least every positive point of support is wanting for this. It is more likely that we have to do with functional disturbances, at the foundation of which molecular alterations may well lie, but which escape detection.

That the ganglion-cells of the cerebrum perform a certain part in the act of perception of sensitive impressions, appears to be beyond doubt, although the experiments of Schiff and others in reference to the generation of heat in the active brain have as yet led to no decided results. The irritation which calls into activity the ganglion-cells of the sensitive centre is the irritation coming from the peripheral nerve-fibre, and perceived as pain. The activity excited in the ganglion-cells will always be the same, since the irritation (the pain in the case under consideration) is always the same, no matter what change at the periphery lies as causative force at the foundation of the pain. It may be either a neuralgia, or an irritation of the sensory fibres, dependent upon a coarse anatomical change. When this activity has continued for some time, then, as in other organs, a fatigue will certainly set in,—i.e. the excitement coming from the periphery will no longer produce the same effect; the perception becomes enfeebled. In this way it may happen that slight sensitive impressions are no longer perceived at all, or only indistinctly.

The degree of the fatigue of the central organ bears natu-

* Compare my proposition, "Trophic Disturbances in Neuralgia" (*Griesinger's Arch. für Psychiatrie*, etc., Bd. ii. S. 29-37).

† Pathological Anatomy of the Tactile Bodies.—*Virchow's Archiv*, Bd. xlv.

rally some relation to the intensity and the duration of the irritation,—the pain. This will explain the fact that slight pains with considerable intermissions or remissions, or even more severe pains but of shorter duration, such as exist in many subacute and acute inflammatory affections, do not produce any fatigue of the central organs,—*i.e.* for the case under consideration, do not cause an anæsthesia of the cutaneous surface. On the contrary, in neuralgia with severe attacks, with the pain existing also in the so-called intervals, the central organs are considerably affected, on which account we observe the cutaneous anæsthesia regularly in these cases.

I have already mentioned that the anæsthesia is generally of slight degree in neuralgia. Only in rare cases do we find it very considerable and complete, and these latter may be the cases in which anatomical changes exist in the terminal organs, in the cutaneous ramifications of the nerves, or even in the trunks.

The fatigue of the central apparatus accepted by us also makes intelligible several peculiarities in the disturbances of cutaneous sensibility which would not be comprehensible without this assumption. There is, above all, the great extent of the anæsthesia so often met with, affecting other nerve-trunks which are not the seat of pain,—often even the entire half of the head. No special reasoning is necessary to enable us to conclude that this depends upon the processes of irradiation, which can only be accomplished by the ganglion-cells. As is known, we have been forced by various reasons to the physiological assumption that every process of excitement arriving from the periphery does not remain limited to the ganglion-cell whose fibre was excited, but that it extends to adjacent cells, and to a degree proportional to its intensity, until by a peculiar resistance in the ganglion-cells it has sunk to the point beyond which the excitement is no longer perceptible. (Compare Bernstein, *loc. cit.*, in the section "The Process of Excitement in the Sensitive Nervous Centre.") These cells naturally are also excited, they also become fatigued; and if now a tactile irritation meets the peripheral termination of a nerve-fibre which is only indirectly in connection with these ganglion-cells, and which is secondarily fatigued by the original pain, a nerve-fibre which was never itself the seat of or the tract for the pain, then will the irritation also appear to be weaker at the point of the skin in question, because the sensitive ganglion-cell is already fatigued by its previous activity.

It may occur to some that a tactile irritation is less distinctly perceived, because at the same time another stronger process of excitement is acting upon the ganglion-cells. The incorrectness of this assumption is self-evident in view of the fact that the anæsthesia exists also in the intervals of pain, and from the circumstance that at one period, in the beginning, together with the spontaneous pain, needle-pricks are perceived not less distinctly than in health, but, on the contrary, more distinctly.

Hitherto we have spoken only of the anæsthesia and a fatigue of the centre of perception. But how is it with the hyperæsthesia which is the rule in the beginning of neuralgia? I have already pointed out that the fact of a sometimes diffused irradiation of the spontaneous pain, and still more of the often widely-extended hypersensitiveness of the skin without spontaneous pain, indicates decidedly the central apparatus as the seat of the disease, by which alone an irradiation of this kind can be produced. It is more difficult to say how the hyperæsthesia arises. The idea that it is produced by the irritation of the tactile sense being added to that of the spontaneous pain, and that the sum of these two irritations produces the hypersensation, is contradicted by the simple fact that the phenomenon can be demonstrated to exist also in the completely painless intervals. A different hypothesis must be sought for the interpretation of the hyperæsthesia.

I have already shown that we do not deal with an actual hyperæsthesia,—an increased power of differentiating simultaneous sensations,—but only with an increase of the intensity of sensation. Bernstein (*loc. cit.*) makes the view very probable, that intensity of sensation is directly proportional to the number of elements excited at the centre. Again, from various facts the postulate follows, that the process of excitation experiences a certain resistance in passing from one ganglion-cell to another, and therefore loses in intensity,—*i.e.* it will be less intense in cell *b* than in cell *a*, less

in *c* than in *b*, until in cell *n* it attains the point where it is just perceptible, and is no longer perceived in cell *n*+1.

If now, at a time when the ganglion-cells are still able to perform their functions and are not yet fatigued, severe and continued excitations reach them from the periphery, it may well be imagined that these produce a condition in which the point of being just perceptible, even for other lesser irritations, is not attained in cell *n*, but only in *n*+1 or *n*+2 up to *x*. As now a greater number of elements is excited, the effect would consist in an increase of the intensity of sensation,—*i.e.* in a hyperalgesia. In this manner the hyperalgesia during the first period of the existence of a neuralgia would be accounted for by the pain.

I am well aware that the attempted explanation can only be an hypothesis. Yet in the domain of nerve-pathology there are many processes which will never be accessible to a direct experimental or anatomical investigation; and the proposed hypothesis, at least in my opinion, corresponds most closely with the pathological facts.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY, FEBRUARY 8, 1872.

THE PRESIDENT, DR. J. H. HUTCHINSON, in the chair.

DR. JOHN ASHHURST, JR., exhibited the following specimens:

1. *Excision of elbow.*—The articulating extremities of the humerus, radius, and ulna, from a case of arthritis of the left elbow-joint, in which excision had been performed three weeks previously. The patient was a boy ten years of age, and the origin of the disease was attributed to an injury which had been received a year before. The operation consisted in laying open the joint by a single longitudinal incision, the bone-sections being made with a Butcher's saw. Care was taken to avoid injuring the ulnar nerve, to preserve those fibres of the triceps tendon which are inserted into the fascia of the forearm, and to respect the attachment of the biceps tendon to the tuberosity of the radius. The wound was lightly dressed with oiled lint, and the limb placed upon an obtuse-angled internal splint; this being subsequently alternated with an anterior splint, so as to guard against the occurrence of ankylosis. The progress of the patient towards recovery had so far been quite satisfactory, and there was every reason to anticipate a perfectly successful result. The specimens showed marked ulceration of the articular cartilages, with caries of the adjacent bones.

2. *Mammary cancer.*—The left mammary gland, removed from a patient 69 years old, who had suffered from cancer of the part for seven or eight months. The tumor was painful and rapidly growing, and the skin about to become adherent; the nipple was somewhat retracted; there was no adhesion to the pectoral muscle, and no glandular implication. Excision was practised by means of an oval incision, so planned as to include all the integument which was at all brawny. The tumor was not cut into, and, indeed, not seen at all during the operation,—a matter of some importance, as the prospect of non-recurrence was in this way made better than if the new growth had been laid open and cancer-germs thus scattered about the wound. The tumor appeared to belong to the class designated by Paget as firm encephaloid. The condition of the patient since the operation had been satisfactory.

3. *Compound fracture of skull; intra-cranial abscess.*—A portion of the skull-cap removed from the body of a man 60 years of age, who had entered the Episcopal Hospital on account of a severe injury of the head, on Dec. 27, 1871. There was a large lacerated and contused wound of the scalp in the right parietal region, and the skull was denuded of periosteum over a considerable extent of surface. It was at first supposed that there was no lesion of the bone itself; but it was subsequently discovered that there was an impacted fracture with very slight

depression, the line of fracture completely circumscribing an irregularly oval-shaped plate of bone about two inches long by one and a half inches broad, which slowly became necrosed. For between three and four weeks the patient appeared to do well, the wound granulating freely, and no symptoms arising to indicate cerebral complication, with the single exception that the mouth could not be widely opened. In the latter part of January, 1872, however, the patient's intellect, which had at no time been brilliant, became more and more clouded, his appetite failed, and the wound assumed a less healthy appearance. On the 27th it was found that a portion of the dead bone had become loose, and when this was carefully picked away the membranes were found perforated, and a slight gush of grumous pus and disintegrated brain-matter rendered it pretty certain that a cerebral abscess had been opened. It was now thought right to remove all the dead bone, and this was accomplished by the aid of the trephine, the underlying dura mater, except at the point of perforation already mentioned, being found healthy and pulsating. The next day (28th) the face was slightly drawn to the affected side; but there was no paralysis of the extremities, no strabismus, no delirium, and no marked change in the patient's general condition. From this time hebetude gradually increased, terminating ultimately in coma, and death following on the morning of January 30. The autopsy revealed a very large abscess in the right hemisphere of the brain, but no meningitis; showing that if the removal of so large a plate of bone had done no good, it had at least done no harm. The abscess, which must have been slowly forming almost from the date of injury, had caused death, not, as is commonly the case, by bursting into the lateral ventricle, but by opening externally at the base of the brain, and thus leading to fatal compression of the medulla.

4. *Necrosis of the skull following otorrhœa; general meningitis.*—The base of the skull from the body of a sailor, who died at the Episcopal Hospital on the fifth day after his admission to the surgical wards on account of otorrhœa of long standing, affecting both ears. Both tympanic membranes were destroyed, and there was very marked diminution of hearing-power; but no accurate investigation could be made, on account of the patient's general condition. Though manifestly very ill, there were no positive evidences of meningitis, there being neither paralysis, strabismus, nor delirium, though there was on the last day of life intense headache, and a *tache cérébrale*,—not, however, sufficiently marked to be in any degree distinctive. Death, preceded by coma, occurred on the fifth day, and a post-mortem examination revealed general arachnitis on both sides, above and below, with a considerable formation of tolerably recent lymph. There was decided roughness on the inner surfaces of the petrous portions of both temporal bones, and on the left side a small exostosis-like projection had perforated the dura mater. There was no intra-cranial suppuration, and no accumulation of pus in the mastoid cells.

Dr. H. ALLEN exhibited, for Dr. RICHARD MOFFET, a specimen of *inflammatory constriction of the large intestine*.

REVIEWS AND BOOK NOTICES.

FECUNDITY, FERTILITY, STERILITY, AND ALLIED TOPICS.
By J. MATTHEWS DUNCAN, A.M., M.D., etc. Second Edition, Revised and Enlarged. Pp. 498. New York, Wm. Wood & Co., 1871.

The subject-matter of this work is of that delicate but important class which is often invaded by unconscientious medical and other writers with sinister motives. Such men take their position unblushingly beyond the dividing-line which separates purity from quackery, although they attempt to disguise themselves in the transparent cloak of professional propriety. Far more worthy is the object, and very different the result, in the hands of so reliable an authority as Dr. Duncan, a second edition of whose valuable statistical treatise now claims our attention. The facts on which it is founded are necessarily imperfect, from insufficiency of data; and the author is so sensible of the inadequacy and inaccuracy of most of the registrations bearing on the facts discussed, that he has abandoned all save one,—restricting himself for his statistics

wholly to the systematic registration of 16,593 legitimate births in Edinburgh and Glasgow during the year 1855. Curiously enough, this year in its completeness stands alone on the records; for although "the schedule in use exacted from the public a variety of interesting details in connection with each return,—a circumstance which gives to the registers for that year an extraordinary value," we learn that "in consequence of numerous complaints regarding the irksome labor of filling up the documents, it was discontinued, and a much less comprehensive schedule has been in use ever since." He first defines fertility as "the amount of births as distinguished from the capability to bear," and fecundity as "the demonstrated capability to bear children; it implies the conditions necessary for conception in the women of whom its variations are predicated. In short, fertility implies fecundity, and also introduces the idea of number of progeny; while fecundity simply indicates the quality, without any superadded notion of quantity." In spite of the apparent lucidity of this explanation, it requires from even the clearest minds a very careful reading of the text—especially of Part I., "The Variations of the Fecundity and Fertility of Women according to Age," divided as it is into five chapters of statistical details—to avoid being thoroughly confused in this refinement of terms employed. The most important conclusions arrived at in this valuable portion of the work may be briefly given. The great majority of the population is recruited from women under thirty years of age; but the mass of women in the population of from thirty to forty years of age contribute to the general fertility a larger proportional share than the mass of women of from twenty to thirty years of age. The wives, taken collectively as a mass, show a gradually decreasing fecundity as age advances; but the average individual wife shows a degree of fecundity which increases until probably about the age of twenty-five, and then diminishes. The fecundity of the average individual woman may be described as forming a wave, which from sterility rises gradually to its highest, and then more gradually falls again to sterility.

Part II. (five chapters) is devoted to "The Weight and Length of the Newly-born Child" as influenced by the mother's fecundity, statistically derived from the records of only 2070 pregnancies, with 2087 children, in the Edinburgh Royal Maternity Hospital. He concludes that increase of weight and length of the child is in direct dependence on the age of the mother, and that the vigor of the female reproductive system waxes until the age of about twenty-five years is reached, and then wanes. In Part III. (five chapters),—"Some Laws of the Production of Twins,"—twin-bearing, which occurs once in about eighty deliveries, is shown not to be an accident, but a condition governed in its occurrence by certain laws. The largest number of twins is produced by women between the ages of twenty-five and twenty-nine; the mean age of twin-bearing mothers is greater than that of mothers generally; twins increase in frequency as mothers become older; newly-married women are more likely to have twins the older they are; and a woman is more likely to have twins in each succeeding pregnancy than in the former pregnancy, but the first pregnancy is an exception. Part IV. (fifteen chapters) discusses "The Laws of the Fertility of Women," so elaborately that we have not the space even to analyze it. The topics considered may really be embraced under the head of fertility of marriage, or, as the author prefers to call it, "sustained fecundity, or the laws of the fertility of women cohabiting with men during the child-bearing period of life." Parts V. and VI. (in all, eleven chapters) continue the investigation, especially in regard to sterility; the latter including an exposition of our author's views by Professor Tait, of Edinburgh, partially by means of algebraic formulæ,—a mode of elucidation which, though very conclusive, will not make the subject much clearer to the comprehension of the average medical reader, with whom, so many years after his departure from college halls, algebra has already become one of the "lost sciences." Perhaps the most interesting conclusions arrived at by Dr. Duncan on this subject are, that the question of a woman's being probably sterile is decided in three years of married life; that the older a fertile woman is at marriage, the older is she before her fertility is exhausted; and that a wife who, having had children, has ceased for three years to exhibit fertility, has probably become relatively sterile,—that

is, will bear no more children,—and the probability increases as time elapses. The author very justly states that “the conclusions here arrived at will afford to medical men means of estimating the utility of the many vaunted methods of curing sterility which are now much in vogue, and which, considering the nature of the condition to be cured, justly excite anxiety for the honor of the profession in the minds of its best friends.”

The “Mortality of Childbed,” “The Age of Nubility,” “The Duration of Labor,” and “The Duration of Pregnancy” are the subjects discussed in the remaining portions of the work, embracing altogether about twenty chapters. Making a distinction between deaths immediately after childbirth and those in childbed, or within about a month after childbirth, the author states that not fewer than 1 in every 120 women delivered at or near the full time dies within the four weeks of childbed. The mortality of first labor is about twice the mortality of all subsequent labors taken together, and this applies to the proportion of deaths from puerperal fever also. As the number of a woman's labors increases above nine, the risk of death following labor, and also from puerperal fever, increases with the number. Youthfulness is found to have less influence in producing mortality from parturition than elderliness; the age of least mortality being near twenty-five years, and the age of greatest safety in parturition coinciding with the age of greatest fecundity. The marriageable age for women is discussed,—not, however, with any reference to individuals of the class who “may, by peculiarities of constitution, be to a greater or less extent removed from subjection to the laws which govern the sex generally;” and allusions are made to the tardy completion of the structural development of the pelvis as a bony skeleton, as an argument against too early marriages. The period between the ages of 20 and 24, inclusive, being found to be the safest for parturition generally, it is a justifiable inference that this age is safest for a first parturition; and Dr. Duncan therefore thinks a woman should marry between 20 and 25, especially as his statistics have shown this age of marriage to be most secure of fecundity, and therefore most likely to obviate sterility. Equally interesting is the confirmatory fact that a greater number of children survive born of women married at from 20 to 25 years of age, than at any other.

The author's statistical analysis of obstetric data also covers the ground of the duration of labor; and his propositions may be briefly stated. The mortality of women in parturition and childbed increases with the increasing duration of labor, and the duration of labor is only an inconsiderable item among the many causes of the mortality of women in parturition and the subsequent childbed. The duration of pregnancy is fixed—from the records of only 46 cases, however—at 275 days, although in one case quoted it was protracted to 293 days, and may, in the author's opinion, be extended beyond these limits three or four weeks, or even longer.

These, then, are the main facts which, though briefly summed up in this bibliographical notice, constitute a volume of genuine value and interest to the profession. We might wish that the writer could have found leisure from the cares of practice and the claims of authorship to incorporate still more recent statistics with those of the first edition, although we have no means of knowing whether such new data are available or accessible. The author has called into requisition many important facts outside of Edinburgh and Glasgow, however, although scarcely any other cities of the world have attempted to rival in accuracy of detail the two Scottish towns, which, by the imposition of excessive labor in 1855, so thoroughly fatigued the census-takers that they have never since recorded sufficiently reliable statistics for Dr. Duncan or any other authority to make use of. No one should take up this volume with the expectation of finding it, as its title might imply, either an elaborate physiological or pathological treatise; it is rather a contribution to a special department of medical literature which few have the patience or the ability thoroughly to explore,—that of Medical Statistics. The intimate interweaving of data and laws forms a fascinating study, which, while interesting a vast number of readers, rarely finds an exponent so conscientious as Dr. Duncan. Some of the conclusions at which he arrives are possibly founded on an insufficient number of facts; but we believe that he will have the honesty to

correct them hereafter, if such correction be rendered necessary when the opportunity for more extended observation is afforded him.

R. J. D.

DIAGRAMS OF THE NERVES OF THE HUMAN BODY. Exhibiting their Origin, Divisions, and Connections, with their Distribution to the Various Regions of the Cutaneous Surface and to all the Muscles. By WILLIAM HENRY FLOWER, F.R.C.S., Assistant-Surgeon to and Demonstrator of Anatomy at the Middlesex Hospital. Edited, with Additions, by WILLIAM W. KEEN, M.D., Lecturer on Anatomy and Operative Surgery in the Philadelphia School of Anatomy, etc. Philadelphia, Turner Hamilton, 1872.

The editor says in his preface that “the signal benefit derived from these diagrams as illustrations in teaching, and their great convenience for ready reference in practice, have led to their republication, reduced to one-fourth the size of the originals.”

The author certainly has attained his object in the publication of this work, which is to remove some of the difficulties which surround the study of the anatomy of the nervous system. The plates are fairly executed, and the work will, we think, be found to be useful not only to the student but to the busy practitioner of medicine.

BOOKS AND PAMPHLETS RECEIVED.

Earth as a Topical Application in Surgery. Being a Full Exposition of its Use in all the Cases requiring Topical Applications admitted in the Men's and Women's Surgical Wards of the Pennsylvania Hospital during a Period of Six Months in 1869. By Addinell Hewson, M.D., one of the Attending Surgeons to the Pennsylvania Hospital. With four Photo-Relief Illustrations. 12mo, pp. 309. Philadelphia, Lindsay & Blakiston, 1872.

Half-Yearly Compendium of Medical Science. Part IX., January, 1872. 8vo, pp. 308. Philadelphia, S. W. Butler, M.D., 1872.

Transactions of the Iowa State Medical Society. 8vo, pp. 272.

The Question of Quarantine: The Nature and Prevention of Communicable Zymotic Disease. By Alfred L. Carroll, M.D. From advance sheets of *The Medical Gazette*.

Catalogue of the Trustees, Professors, and Students of the Jefferson Medical College of Philadelphia. Session of 1871-72.

GLEANINGS FROM OUR EXCHANGES.

ON THE DIAGNOSIS OF SYPHILIS BY THE MICROSCOPE.—Dr. Linstorfer (*Medical Times and Gazette*, January 27, 1872) has recently read a paper before the Vienna Medical Society, containing the results of investigations into the nature of the microscopic appearance of the blood of syphilitic patients. Under the microscope, he says, during the first two days of investigation nothing could be seen except vibriones, bacteria, and commencing forms of sarcina. On the third or fourth day, however, and, in exceptional cases, after the lapse of twenty-four hours, minute bright corpuscles became visible, some of which remained immovable, while others continued in a state of undulation. Some of these bodies exhibited a projection. On the fourth day (exceptionally on the third, fifth, or sixth day) the corpuscles were enlarged in bulk and in numbers. Of those enlarged, the majority had the projections just named, which were undoubtedly a kind of sprouts, which in some cases were larger in size than the corpuscle itself. In the following days the growing continued, so that some of these bodies became as big as, and even bigger than, red blood-corpuscles. Besides these, there were a number of smaller corpuscles visible, growing and sprouting, some exhibiting one projection, others three or more projections; the latter were sessile, or had a minute pedicle. The corpuscles were

by no means all globular, but of different irregular shapes. After eight or ten days a vacuola was formed in the larger corpuscles, which extended over the whole corpuscle, and terminated the further development of the growth. Different fluids, as solutions of sugar and of common salt, Pasteur's liquid, acetic acid, etc., were not able to arrest the shrivelling of the bodies and further retrograde development.

After the reading of the paper, Prof. Stricker said that its author had been tried seven times. In the first trial, twelve objects, numbered and registered, were given to Dr. Losterfor; two (Nos. 8 and 9) were taken from healthy persons, the other ten from three patients suffering from different forms of syphilis. After a few days Dr. Losterfor responded, "Nos. 8 and 9 healthy; two objects spoiled; the rest syphilitic."

Professor C. Wedl writes to the *Wiener Medizinische Presse* for February 4, 1872, to say that the so-called syphilitic corpuscles occur in normal as well as syphilitic blood, and are in his opinion nothing else than masses of protoplasm or of fat, and not at all characteristic of syphilis.

THE BRUIT DU DIABLE.—M. Duchek (*Lancet*, February 8, 1872) thus explains this murmur: The jugular vein behind the insertion of the sterno-cleido-mastoideus is wider than elsewhere, forming the bulbus. Beneath this bulbus are valves in the narrowest part of the vein. These valves have a most important influence upon the whole circulation of the blood. The pressure in the thorax being too high, they approach one another, and in this way oppose the further entrance of blood into the thorax. The part above them must be consequently dilated, as we remark it in cases of stagnation in the heart. The jugular vein being distended, and the jugulum growing gradually more shallow, the impulse of the blood makes these valvulae vibrate, and causes the murmur. When the blood flows slowly the impulse is too weak, and no murmur is to be heard. The murmur arises when the valvulae are half opened and put into vibration by a sufficient rush of blood. If the pressure in the thorax increases, by valvular failures, emphysema of the lungs, etc., the stream flows slowly; and therefore we do not find these murmurs attending disorders of the intra-thoracic organs; and hence the general view that this bruit excludes insufficiency of the valvula mitralis. Another consequence of this fact is that these murmurs are not to be heard in persons affected by anæmia when they become the subjects of pneumonia or exudative pleurisy, and that they reappear at recovery. The two necessary requisites, then, are a speedy circulation of blood and a normal pressure of the blood in the thorax. This view affords us an explanation of the murmur growing stronger when the respiration is more hurried.

THE USE OF GLYCERINE AS A SOLVENT IN HYPODERMIC INJECTIONS.—Dr. M. Rosenthal calls attention, in the *Wiener Medizinische Presse* for January 7, 1872, to the power which glycerine possesses to dissolve various of the substances which are ordinarily used in hypodermic medication. Its solvent powers are greater than those of water, and are very much increased by heat. Thus, a fluidrachm of glycerine, when heated, will readily dissolve twenty grains of the sulphate of quinia, from ten to twelve grains of the acetate or muriate of morphia, and ten grains of the extract of opium. Morphia may be added to a solution of quinia in glycerine without causing a precipitate. It will also dissolve from half a drachm to one drachm of the iodide or bromide of potassium, and four grains of corrosive sublimate. These substances are not precipitated as the liquid cools; on the contrary, the solution will remain clear and fit for use during at least a year.

INTERNAL STRANGULATION OF THE BOWELS.—Dr. Heiberg, of Christiania (*Virchow's Archiv*, December 15, 1871), after reporting a case of obstruction, says that the twisting of the bowel generally depends upon its distention with gas, as may be demonstrated after death upon the human body by inflating the intestine, when it will be found to turn upon its axis, and thus to convert what was before only a feeble to an absolute obstacle to the escape of air. He recommends that opiates, ice, and other remedies which diminish the peristaltic movements, should be prescribed; and, if these fail, that the physician should have recourse to puncture of the intestines. In cases which are not relieved by puncture, the propriety of opening the abdomen should be considered.

DISEASE OF THE NERVOUS SYSTEM FOLLOWING SMALL-POX.—Dr. Westphal, at a meeting of the Berliner Medizinische Gesellschaft (*Wiener Medizinische Presse*, January 14, 1872), described an affection of the nervous system following severe attacks of variola, which he has observed several times. The principal symptoms are coma and delirium during the attack of smallpox. When consciousness has returned, there is a peculiar derangement of speech, which is exceedingly deliberate: the voice is without modulation, pitched very high, and somewhat nasal in tone. There is tremulous movement of the head, like that seen in paralysis agitans. The upper extremities are the seat of a very high degree of ataxia, but are not paralyzed. The patients are unable to button or to unbutton their coats, to write, etc. When the eyes are closed, there is no increase of the ataxic symptoms. The sensibility of all kinds is undiminished. The walk of those affected with this disease resembles that of the subjects of locomotor ataxia, but they are able to stand with their feet close together when their eyes are closed.

LACTIC ACID IN DIABETES.—Dr. George William Balfour, in a paper read before the Medico-Chirurgical Society of Edinburgh (*Edinburgh Medical Journal*, December, 1871), calls attention to some observations of Professor Cantani, of Naples, on the use of lactic acid in diabetes, and reports seven cases of this disease in which he has employed it. Prof. Cantani believes that in diabetes the question is not so much one of increased production as of defective combustion of sugar; and this defective combustion, he thinks, depends upon the production of a morbid form of glucose, which he terms paragluose. This is incapable of being transformed into lactic acid, and therefore cannot be burned, but is passed unchanged in the urine. The consequence is that the heat of the body must be maintained at first by the combustion of the albuminates and fats, and later in the disease by that of the patient's own tissues. He, in common with many modern pathologists, recognizes the liver as the organ mainly at fault in diabetes; and his treatment is partly directed towards giving it as complete a test as possible by depriving it of its pabulum, which is accomplished by subjecting the patient to a rigorous meat-diet, thus reducing to a minimum the introduction into the system of sugar-producing substances, and partly towards arresting the waste and ultimate complete degradation of the body, by supplying a combustible agent in a quantity sufficient for the wants of the body, so that the fats may continue to be stored, and the body thus gradually brought back to its normal standard; and he hopes that this restoration of the healthy standard of the constitution, coupled with the prolonged functional rest to the organ affected, may suffice to prevent any relapse into its morbid condition, even after a return to the ordinary dietetic conditions of modern civilized life.

The combustible agent which Cantani has selected is lactic acid; and this he administers in doses of from 77 to 154 grains daily, diluted in from eight to ten fluidounces of water. An exclusive meat-diet is insisted upon; for drink he allows water, either plain or with a little of the purest alcohol; coffee, tea, and wine being prohibited.

His results have been somewhat surprising. In recent cases the cure is stated to be almost certain and speedy; and even where an exclusive meat-diet is not persisted in, life is apparently prolonged, and many of the unfavorable results of diabetes are prevented, though the melituria is not arrested. The success which has been claimed for the treatment in which skim-milk is the exclusive article of diet is readily understood when we reflect that milk contains from three to six per cent. of lactin, which, under the influence of the caseous matter, becomes transformed into lactic acid.

MACRODACTYLISM.—The *Wiener Medizinische Presse* for January 7, 1872, contains full reports of two cases of this deformity, and references to two others. In one case one lower extremity was four inches longer than the other. Although the patient was only seven years of age, his foot measured from the heel to the end of the great toe thirty-two centimetres, and to the end of the little toe fourteen centimetres. The distance from the sole to the highest point of the instep was eighteen centimetres, but this was in part due to a fatty tumor situated on the dorsum of the foot. The great toe was nine centimetres long, and twenty-four in circumference.

MISCELLANY.

AMERICAN MEDICAL ASSOCIATION.—The Twenty-third Annual Session will be held in Philadelphia, Pa., May 7, 1872, at 11 A.M. Committees are expected to report:—On Cultivation of the Cinchona Tree. On the Anatomy and Diseases of the Retina. On the Comparative Pathology and the Effects which Diseases of Inferior Animals have upon the Human System. On the Structure of the White Blood-Corpuscles. On Vaccination. On Skin-Transplantation. On the Nature and Process of the Restoration of Bone. On some Diseases peculiar to Colorado. On Correspondence with State Medical Societies. On National Health Council. On Nomenclature of Diseases. On what, if any, Legislative Means are expedient and available to prevent the Spread of Contagious Diseases. On American Medical Necrology. On Medical Education. On Medical Literature. On Prize Essays. On the Climatology and Epidemics of all the States.

Physicians desiring to present papers before the Association should observe the following rule:

“Papers appropriate to the several Sections, in order to secure consideration and action, must be sent to the Secretary of the appropriate Section at least one month before the meeting which is to act upon them. It shall be the duty of the Secretary to whom such papers are sent to examine them with care, and, with the advice of the Chairman of his Section, to determine the time and order of their presentation and give due notice of the same.”

Secretaries of all medical organizations are requested to forward lists of their delegates, as soon as elected, to the Permanent Secretary.

Railroad and hotel arrangements will be announced at an early date.

W. B. ATKINSON, *Permanent Secretary*,
1400 Pine Street, Philadelphia.

ORTHOPÆDIC HOSPITAL OF PHILADELPHIA.—The new hospital situated at the northeast corner of Seventeenth and Summer Streets was formally opened on Saturday, February 17. A large number of the friends of the institution were present, and addresses were made by Drs. Henry Hartshorne and A. Nebinger, and by Francis Wells, Esq.

The medical staff of the hospital consists of the following gentlemen: Consulting Surgeons, Drs. S. D. Gross and Geo. W. Norris; Attending Surgeons, Drs. T. G. Martin, D. Hayes Agnew, H. Earnest Goodman, and W. Hunt; Physician, S. Weir Mitchell, M.D.; Medical Electrician, Matthew J. Grier, M.D.; Resident Physician, David Davidson, M.D.

PORTRAIT OF DR. GEORGE B. WOOD.—The Managers of the Pennsylvania Hospital have requested Dr. Geo. B. Wood, late Professor of the Theory and Practice of Medicine in the University of Pennsylvania, and for twenty-four years an Attending Physician to the hospital, to sit for his portrait, and he has consented to do so. The portrait, when painted, is to be hung in some conspicuous position in the hospital, and is intended to show the appreciation of the Board of Managers for Dr. Wood's former services, and for the many favors he has conferred upon the hospital.

METEOROLOGICAL.—The highest temperature recorded during the past month was 54°.5, on the 25th; the lowest was 13°, on the 1st. The mean temperature of the month was 32°.62, or slightly below the average since 1825, which is

33°.15. The average temperature for the month of February since 1790 is 30°.82.

The average mean temperature of last winter was 31°.49; that of the winter of 1870-71 was 33°.65; that of the last eighty-three winters is 31°.5.

The total rainfall during the month of February was 1.19 inches, against 3.09 inches in February of last year. The average rainfall for the month during the past thirty-five years is 3.03 inches.

THE AMERICAN DIPLOMA-MARKET.—The *Medical Press and Circular* contains the following: “The *Roscommon Journal* announces—as if it were an event for the county or parish to be proud of—that the local curate had received from the University of Philadelphia—Dr. Paine's sewing-machine, bill-printing, and doctor-making shop—a degree of LL.D., *honoris causa in absentia*. ‘Honoris causa’ indeed! Perhaps ‘Dollaris causa’ would be more appropriate.”

RINGS were among the most ancient of ornaments. In the British Museum is a signet-ring, on which are engraved the name and remedy of the physician: “*Hierophili opobalsamum*; none genuine unless stamped with the owner's private seal.” Ancient politicians were also in the habit of wearing rings with a hollow place under the gem, in which the most deadly poison was kept.

THE COSTLINESS OF PREVENTIBLE DISEASE.—The *Edinburgh Medical Journal* for January, 1872, says, “Some idea of the cost to the country of preventible disease may be gathered from a calculation in the *Times* of December 12, of the actual cost of enteric (typhoid) during the last ten years, since the death of the Prince Consort. The data are, on an average annual mortality of 20,000, a mortality of 1 in 6, a value of £100 for each life lost, and a cost of £12 per case in loss of labor and expense of maintenance. These data are manifestly conjectural, but they have a known basis of reality sufficient to entitle them to consideration as a rough measure, probably under the mark, of the extent of an evil we have hitherto tamely endured. And upon them is founded the calculation that during the last ten years the loss to the country from the unchecked spread of enteric fever has been not less than £34,000,000 sterling, or an average of upwards of three millions of pounds sterling per annum, besides an additional sum for interest. Surely, as Dr. Acland has said, no measure could more redound to the glory of a government than one which would render such expensive and ‘senseless accidents’ impossible alike in the houses of the rich and of the poor. And the *Times* has made this practical suggestion: that every case of enteric fever should lead to a judicial inquiry into its causes, and any person or corporation found responsible by any act or default for its production should be liable in pecuniary damages to the sufferer or his representative. There can be little doubt that some such enactment would at once lead to such watchfulness over architects, builders, and plumbers as would speedily produce a marked sanitary reform. And we see no reason why railway-companies should be amerced in heavy damages for accidents from defective material, while architects get off scot-free for so-called accidents, more harassing and painful in their nature, more expensive to the country, and no more to be regarded as ‘dispensations of Providence’ than deaths following running a train with a cracked axle in its midst.”

MEDICAL DEPARTMENT OF HARVARD UNIVERSITY.—The number of students in all the departments of Harvard University

is not so large as last year by 210. The principal falling-off (105) is in the number of medical students, which is in all probability caused by the important change in the plan of study and the requisites for a medical degree which has been recently introduced into this school.

A MONTHLY medical journal in the French language is now published at Montreal, Canada, under the title of *L'Union Médicale du Canada*.

It is said that chicken-pox has been prevailing lately in San Francisco in an aggravated form. Some of the cases have resembled smallpox so closely in character as to have been reported as such to the Board of Health.

THE LORD-RECTOR OF THE UNIVERSITY OF EDINBURGH ON FEMALE MEDICAL EDUCATION.—Sir William Stirling Maxwell, who was recently installed as Lord-Rector of the University of Edinburgh, is evidently warmly in favor of the female medical movement. In his address he said, "From the earliest times woman has been the presiding genius of the sick-room, often the sole medical attendant, always the physician's first lieutenant. So long as it is probable that women will continue to minister to their sick children and husbands, and to be charged with the responsibility of fulfilling the doctor's directions, I must hear some argument more convincing than I have yet heard why they are to be debarred from learning the scientific grounds of the art of which they are so often the empirical practitioners or the docile and intelligent instruments."

THE MEDICAL PROFESSION IN VALPARAISO.—The *Medical Times and Gazette* of January 20, 1872, says that the medical practitioners of Valparaiso are required by the government to attend all cases, day or night, with or without payment, whatever the position of the patient might be. This was felt to be a great hardship by the profession, and a meeting was called of almost all its members in the place, to take steps to remedy the abuse. Certain resolutions were passed in favor of payment by the government for night- and other attendance upon the poor. This proposition was answered by an insolent and intolerant manifesto from the Intendant. Upon the issue of this document all the medical practitioners of the town, with the exception of Drs. Birt and Fischer, resigned. The following extracts from the manifesto will, we think, interest our readers:

"Every physician practising his profession is compelled to assist the sick at whatever hour of day or night he may be called, excepting during the hours of his 'turn' referred to in the following article, under a penalty of \$40 for each occasion in which he fails in this respect.

"There shall be two doctors on 'turn,' in order to attend to the extraordinary calls which may be made on them during the advanced hours of the night,—i.e. from 12 P.M. to 7 A.M. The doctors on 'turn' shall not be allowed to excuse themselves from rendering these services, except on account of some cause made good to the satisfaction of the authorities, and on leaving in their place another medical man to do their duty. In this case they must give timely notice to the Intendencia. The doctors on 'turn' shall be exempt from obligation of assisting any patients during those hours not comprehended therein. Those who fail in whatever is comprehended in this article incur a penalty of forty dollars."

THE DARWINIAN THEORY.—At Carlisle, England, recently, a respectable-looking young man deliberately climbed on to

the parapet of the bridge, jumped into the river Eden, and was drowned. In a memorandum which he had left behind him, addressed to the chief constable, the suicide gave as a reason for self-destruction that, the Darwinian theory having proved men to be descended from monkeys, he did not desire to live any longer.

IN LUCK.—A Dr. McIntyre, of Odiham, operated upon a lady about twenty years ago for femoral hernia, and cured it. The lady died recently, and has left him, as one of her executors, a legacy of £100, together with a bequest of £4000 "in testimony of his great kindness and professional skill."

MORTALITY FROM SMALLPOX.—The number of deaths from smallpox in Philadelphia during the weeks ending February 24 and March 2 and 9 were respectively 138, 121, and 118, of which 235 were of minors.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending		
	Feb. 24	Mch. 2	Mch. 9
Consumption	56	53	56
Other Diseases of Respiratory Organs	64	65	56
Diseases of Organs of Circulation	25	13	27
Diseases of Brain and Nervous System	60	56	52
Diseases of the Digestive Organs	28	15	19
Diseases of the Genito-Urinary Organs	8	3	8
Zymotic Diseases	169	152	149
Cancer	8	5	6
Casualties	7	8	6
Debility	26	30	36
Intemperance	1	2	0
Malformation	0	1	0
Old Age	13	12	9
Scrofula	0	3	1
Syphilis	0	1	1
Suicide	0	0	0
Tumors	0	0	1
Tetanus	0	2	0
Stillborn	20	22	19
Unknown	0	1	0
Unclassifiable	10	4	9
Totals	495	448	455
Adults	219	226	235
Minors	276	222	220

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM FEBRUARY 21, 1872, TO MARCH 4, 1872, INCLUSIVE.

- WIRTZ, H. R., SURGEON.—By S. O. 3, Department of Arizona, January 15, 1872, assigned to duty at Camp Hualpai, A. T.
- FRANTZ, J. H., SURGEON.—By S. O. 40, Department of the South, February 24, 1872, assigned to duty at Columbia, S.C.
- MACKIN, CHARLES, ASSISTANT-SURGEON.—By S. O. 40, Department of the South, February 24, 1872, assigned to duty at Fort Macon, N.C.
- BARTHOLOMEW, J. H., ASSISTANT-SURGEON.—By S. O. 40, Department of the South, February 24, 1872, assigned to duty at Chester, S.C.
- LAUDERDALE, J. V., ASSISTANT-SURGEON.—By S. O. 46, War Department, A. G. O., February 24, 1872, granted leave of absence for thirty days, with permission to apply for sixty days' extension.
- POWELL, R., ASSISTANT-SURGEON.—By S. O. 28, Department of the Gulf, February 20, 1872, assigned to duty at Jackson, Miss., relieving Assistant-Surgeon A. A. Yeomans, U.S.A.
- KIMBALL, JAS. P., ASSISTANT-SURGEON.—By S. O. 42, War Department, A. G. O., February 19, 1872, to proceed without delay to New Orleans, La., and report to the Department Commander.
- COWLES, EDWARD, ASSISTANT-SURGEON.—By S. O. 44, War Department, A. G. O., February 21, 1872, his resignation accepted, to take effect March 1, 1872.

MONDAY, APRIL 1, 1872.

ORIGINAL LECTURES.

CLINICAL LECTURE ON URETHRAL FEVER.

BY JOHN H. BRINTON, M.D.,

Surgeon to the Philadelphia and to the St. Joseph's Hospital; Lecturer on Operative Surgery at the Jefferson Medical College.

Delivered at the Philadelphia Hospital, February 14, 1872.

GENTLEMEN,—I desire this morning to say a few words to you concerning an affection which has not, it seems to me, received from the writers of surgical text-books the attention it deserves. I refer to what is ordinarily known as urethral fever,—a peculiar febrile or irritative condition not unfrequently consequent upon surgical interference with the urethra.

You have in this clinic seen many patients brought before you laboring under the most aggravated forms of genito-urinary trouble; and time and time again you have witnessed, at the hands of my colleagues and myself, the various operations for organic stricture, and for urethral and perineal fistula. In an institution such as ours, the cases of this kind which reach us are usually very grave,—often, indeed, at first sight, desperate. They are in fact those which, so to speak, have run the gauntlet of surgical intervention, and oftentimes find their way here when abandoned elsewhere. And yet I think that I may fairly claim for the surgical staff of this hospital a high degree of success in the treatment of these aggravated cases,—a success which is due, I believe, in the main to the very decided operative interference we are in the habit of adopting.

Rupture of stricture, its over-dilatation, and internal division, or these methods combined, as well as the varieties of external perineal section, are operations with which you are familiar from the testimony of your own eyes. How successful we have been, particularly in the three first-mentioned operations (and I refer to these especially, only because they form so large a majority of our operated cases), you can judge as well as I. You have seen the patients submitted to the different procedures, and most frequently after the expiration of two or three weeks you have seen them walk into this arena relieved of their strictures and ready to be discharged from the wards.

I do not this morning intend to dwell upon the indications of these operations, nor shall I seek to weigh their individual merits in the scale. I take it for granted—indeed, I well know—that all in their proper places are trustworthy procedures. But I do wish now to impress upon your minds, as forcibly as words of mine can, the important clinical fact that each of these operations, no matter how delicately performed, may at times give rise to severe shock and to a high degree of constitutional irritation. I have known death to follow the simple introduction of a catheter,—and that, too, by an experienced hand. Fortunately, such a result is rare, but still it may happen to any one, no matter what his skill may be. I would therefore caution you, in entering upon urethral surgery, always to bear in mind that to be forewarned is to be forearmed; and I beg of you never to forget the exceeding sensitiveness of the organs upon which you are operating, and never to forego any precaution which may tend to lessen the danger to your patient. Remember that it is impossible to deal too gently with him; remember, too, how easy it is to employ a force which may prove disastrous—even fatal. By all means, then, cultivate gentleness of manipulation, and do not for a moment suppose that your surgery is bold, simply because it is rough.

I have brought before you this morning three patients lately suffering from aggravated urethral stricture, and who have been treated respectively by dilatation, internal incision, and rupture according to Holt's method. Urethral fever has been present in all three. I will read to you the prominent points of their clinical histories, omitting minor details:

STRICTURES—INTERNAL URETHROTOMY.

J. I., æt. 37; admitted October 26, 1871; fireman and engineer on Reading Railroad. Had gonorrhœa thirteen years ago; cured in five or six weeks. Fifteen months since, noticed that his stream of urine was small and forked. In July, 1871, micturition very frequent and urine scanty, passing at times in drops; towards the end of this month, after over-exertion at a fire, retention occurred, which was relieved by the catheter. Since then he has had no trouble until a few days prior to his admission, at which time almost complete retention took place. On the 27th of October I first saw the patient. I found the bladder high above the pubis, evidently greatly distended, and urine dribbling from the meatus. Instrumental examination demonstrated a tolerably tight stricture about one inch from the meatus, and another, long, tight, and resisting, two and a half inches from the opening. By careful management, however, I succeeded in introducing a silver catheter, No. 11 French (5, of the English scale), and drew off from his bladder no less than fifty-seven ounces of urine. The next day I divided the anterior stricture internally by Charrière's urethrotome. After that I endeavored to overcome the posterior stricture by gradual dilatation, but the irritability of the urethra and the general wretched condition of the patient obliged me to discontinue these efforts for three or four weeks. During this time the stream of urine became gradually less and less. On the 12th of December I again divided the anterior stricture, which had recontracted. On the 17th of January I brought the patient before you, and, having etherized him, divided the posterior stricture by internal incision at three points of its circumference, and then with Thompson's modification of Holt's dilator slowly stretched the parts. The stricture was situated about two and a half inches from the meatus, and was about one inch in length. No. 14 English scale was then readily carried into the bladder. After the operation one-fourth of a grain of morphia and five grains of quinine were directed, to be repeated at intervals of three hours in lessened doses. About six hours after the operation the patient had a severe chill of twenty minutes' duration, accompanied by nausea; pulse 130, and feeble. This was followed by vomiting and profuse sweats, which lasted twenty-four hours, accompanied by great prostration, heavily-furred tongue, malaise, and demoralization. Another chill followed, and again the profuse weakening sweats. Urine high-colored and scanty. By the fifth day this condition of affairs passed off, and the patient became convalescent.

Treatment.—Quinia and morphia; sponging of the surface with tepid alum-solutions; acidulated lemonade, with sweet spirits of nitre, milk-punch, milk, and beef-essence. Locally, hop-poultices to the belly and perineum, and absolute non-intervention with instruments. The patient is now well, passes his water readily and in full stream, and a No. 12 catheter can be passed into the bladder. A marked symptom in this case was the great irritability of the stomach and the rejection of all food other than that mentioned.

STRICTURE—PASSAGE OF METALLIC INSTRUMENT.

F. M., æt. 57. English; blacksmith, and of intemperate habits. Had gonorrhœa when 20, 30, and 45 years of age. The last gonorrhœa followed by a five-years' gleet and by considerable urethral constriction. Was kicked in the perineum when a boy. His stream has always been small. The patient states that fourteen years ago, at Manchester, England, a No. 1 flexible catheter was introduced into his bladder after much difficulty; subsequently Nos. 2, 3, and 4. By these he was much benefited. In 1862 came to the United States. In 1868, at Pittsburgh, stricture very bad; No. 3 metallic catheter then introduced, producing great urethral disturbance and followed by retention, which was relieved by a warm bath. November 20, 1871, admitted to Philadelphia Hospital. I found a stric-

ture near the meatus admitting No. 10 French. Four inches from the meatus I encountered a stricture I could not then pass. Stream of urine very small and forked. December 7 I passed the back stricture with fine whalebone bougie; this was followed by pain and straining on micturition, increasing for several days to such an extent as to lead to defecation on each attempt at urination. *Treatment.*—Rest, anodynes, local warmth, etc., under which he gradually improved. February 3, 1872, I succeeded with much trouble, but without force, in passing a No. 10 (French) silver catheter into the bladder. Six hours afterwards he had a very violent chill, lasting one hour; pulse 120, and thready; nausea and prostration. The chill was followed by fever and profuse sweats lasting the entire night, accompanied by vomiting and some cerebral disturbance. On the succeeding day, pulse 108; had a slight chill, followed by sweats which continued with but slight interruptions for four days, the pulse gradually lessening in frequency and increasing in force. The tongue was at first covered with a white fur, which gradually became very dark and thick. The nausea, constantly-recurring vomiting, and loathing of food, were marked. Convalescent on February 8.

Treatment.—Morphia, quinia, acids, chloroform internally, to control vomiting: milk, punch, beef-essence, and local applications to belly and perineum. The urine after operation, although scanty and productive of pain, passed in good stream. He now passes a better stream of urine, and with less trouble, than he has done for twenty years. He considers himself well; and I regard him certainly as improved.

STRICTURE—RUPTURE BY HOLT'S METHOD.

A. M., æt. 48. Irish; laborer; a man of resolute nerve. Had gonorrhœa twelve years ago, followed by gleet, lasting until within two years. Since the disappearance of gleet the stream of urine has diminished in size,—at times, indeed, passing only in drops and after great straining. Dribbling sometimes took place, both by day and night. Admitted to hospital December 30, 1871. On January 3, 6, 13, and 25, without and with the use of ether, I attempted to pass a stricture just in front of the membranous urethra, but uniformly failed. On the last occasion some slight irritation, which was easily subdued, followed the manipulation. February 3, passed No. 2 (English) silver catheter into the bladder. February 6, etherized the patient, and, before the class, burst with Thompson's Holt's dilator a stricture one inch long and involving the membranous urethra. Passed solid bougie, No. 10 English, into bladder. Ordered quinia, gr. v, and morphia, gr. ¼; to be repeated. Twelve hours after operation patient had a chill, which lasted twenty minutes, with quick pulse, followed by sweats, slight vomiting, dislike to food, thirst, etc. Tongue moderately furred.

Treatment.—Morphia, quinia, milk, acids, punch, beef-essence, and local fomentations. In two days he was convalescent, and is now well, with easy micturition, better than he has had for many years. You see I pass No. 10 catheter into the bladder without difficulty.

Let me add to these histories the clinical accounts of two patients taken from my private note-book:

OBSTRUCTION IN PROSTATIC URETHRA.

In 1871 I was consulted by a lawyer, aged 55, who had suffered for some years from prolonged and painful urination accompanied by much straining, his stream of urine being small. I examined him at my office by the introduction of a No. 10 English Thompson's sound. As its point approached the bladder I experienced a peculiar and unusual resistance, disappearing suddenly before the gentle pressure of the instrument as the latter passed into the bladder. On withdrawal of the sound some venous blood followed; this venous oozing continued for twenty-four hours. In a few minutes after the operation the patient passed his urine in a stream more full than he had possessed for years, and which has so continued until now. On the evening of this examination he had a very severe chill, marked by nausea, quick feeble pulse, and followed by long-continued prostrating sweats accompanied by great gastric irritability. These symptoms gradually passed away, and in three or four days he became convalescent; but it was not until the expiration of two weeks that he was able

to return to his business. I should state that the urine in this case was albuminous, and undoubtedly renal trouble coexisted.

OLD STRICTURE—CATHETERIZATION.

A gentleman aged about 44, prominent in his profession, consulted me some two or three years since. He had long experienced difficulty in urination, and on examination I detected two strictures, the result of a gonorrhœa eighteen years before. One of these strictures was situated near the meatus; this I divided; and the other, at the membranous urethra, I treated by gradual dilatation, advising him to pass a No. 10 solid bougie every few days. This he did for many months, thus rendering his condition quite comfortable. Not very long since he passed the sound somewhat hastily about 9 o'clock A.M. At 2 P.M. he had a slight chill, with headache and nausea. At 9 P.M. he experienced a most violent chill, followed by profuse sweats, constant vomiting, great restlessness, insomnia, and general demoralization. In this condition he remained for two days, retaining almost nothing on his stomach, sleepless, and nervous. At the expiration of two days from the chill I was called in. I found him tremulous, bathed in sweat, and very weak; indeed, his physical condition closely resembled that of a patient suffering from delirium tremens. The gastric disturbance in this case was decided and prolonged,—the mere sight of food producing at once nausea, and often vomiting. I at once directed the administration of quinia and morphia, milk, punch, and beef-essence, and in a few days he became convalescent.

I have thus, gentlemen, briefly sketched the outlines of five cases, in which, as you will observe, the same phenomena of urethral irritation were developed. I might readily refer to many similar instances occurring in my hospital and private practice; but those I have alluded to are sufficient for my purpose this morning. I have selected these because they represent different grades of operative interference with the urethra,—to wit, the simple passage of the sound, dilatation, incision and rupture of stricture, and the overcoming of some morbid growth—possibly a polypus—at or near the neck of the bladder. Let us now examine more carefully the symptoms offering themselves to our notice in these cases.

First, I have *the chill*. As a rule, I have found that the chill following urethral manipulation makes its appearance in six or eight hours after the time of operation, commencing with a cold or chilly sensation in the back, loins, and limbs, but passing rapidly into a true rigor. In this we have the chattering of the teeth and the shivering jerking tremor of the body which are doubtless familiar to all of you as a stage of intermittent. So intense is the chill I am describing that it would seem to be impossible to overcome it, either by general or local warmth, or by the accumulation of extra blankets and bed-covering. It is an obstinate persistent chill, and one which greatly demoralizes your patient. It usually lasts some time,—from twenty to sixty minutes,—and is almost always, I think, accompanied by considerable nausea. Vomiting, too, may occur, but this perhaps most frequently does not arrive until the beginning of the hot and sweating stages. The pulse is quick and feeble, commonly ranging from 110 to 130, and sometimes wanting in regularity. The surface of the body is cold, the face is pinched, and the extremities of the fingers are pale and contracted. The condition, in fact, is apparently one of collapse.

Sometimes, instead of a single violent chill as described, the patient may experience, some two or three hours after operation, a slight creep, which may pass away, to be followed after an interval by the decided well-marked chill of which I have told you.

Such is the chill. To it succeeds a hot *fever*. As far as I have observed, this latter is of short duration, rarely lasting longer than one or two hours, and rapidly passing into the sweating stage. Strictly speaking, I suppose that I ought to call all that period succeeding the chill

the stage of fever, but I prefer to call it the *sweat*, so marked is this symptom, and so long its duration. The patient is literally bathed in perspiration, and so remains for many hours. Indeed, I have seen this condition last almost without break for two or three days; it may perhaps be interrupted for a very little while, perhaps on the second or third day, by a short chill, but still the distressing feature of profuse weakening sweat continues.

The gastric irritability at this time is very great; the nausea is persistent, with constantly-recurring attacks of vomiting difficult to control. The stomach is impatient; it rejects almost everything, and the very sight or smell of food will often cause it to rise in rebellion. The pulse is quick: I have counted it from 130 to 140; but it is not strong. The urine is scanty and high-colored. The state of the tongue in this stage is marked; it is heavily coated at first with a white fur, which gradually becomes almost of a chocolate-brown, and very dry. The thirst is excessive, and the patient craves acid drinks. Insomnia, too, is present; the sick man cannot sleep sometimes for two or three consecutive days and nights, or, if he should doze, he is disturbed by strange dreams. Restless by day and sleepless by night, you can readily imagine, gentlemen, how wretched his condition may become.

Occasionally patients the subjects of traumatic urethral irritation die; it may be from immediate shock, from exhaustion, or from blood-poisoning and metastatic formations. Usually, however, they recover; the pulse falls, the tongue cleans, the vomiting is arrested, the appetite slowly returns, the sweats cease, the nervousness and tremors are allayed, sleep sets in, and convalescence is established.

Such, briefly told, are the characteristics of the urethral shock, fever, or irritation, as I have observed it. It is a capricious fever, appearing at times when least looked for, and after the most delicate interference with the urethra, but absent at other times after most serious operations, when you would almost expect its presence. The liability to its occurrence does not seem to be influenced so much by the character of the operation, or by the pain experienced, as by some peculiar unknown susceptibility on the part of the patient. Perfect anæsthesia will not certainly prevent its advent, nor will the patient's suffering necessarily induce it. I think, however, that I have observed that in deep strictures with coexistent perineal fistulæ, rupture is less apt to be followed by irritative symptoms than where these fistulous tracts do not exist.

From the remarks I have already made, and from the clinical histories I have submitted, you will, I think, gentlemen, properly appreciate the gravity of the affection we are discussing. Let me now add a few words as to its *treatment*. And first, are there any measures which may be resorted to to lessen the likelihood of the occurrence of all these disagreeable symptoms? You have witnessed frequently the precautions I take when about to operate upon the urethra. Before placing the patient upon the table for the administration of the anæsthetic, I usually give him, as a good stimulus, some whiskey or brandy. Then during the operation I take especial care that he shall not be chilled: I do not uncover him unnecessarily; I see that his body and lower extremities are well wrapped in blankets; and I protect him in every way from draughts of air. I look upon all this as very important, for I know that I have seen mischief result from the neglect of just such precautions. Then after the operation I generally empty the patient's bladder with a catheter, and I direct that he be wrapped in a blanket and placed in bed, first taking care to remove from his person any portion of his clothing which may be wet. As soon as he recovers from the anæsthesia, and can swallow, I administer (as has been re-

commended by Sir Henry Thompson) a full dose of morphia and quinia,—one-quarter of a grain of the former and five grains of the latter,—and every two or three hours afterwards I give him, until he sleeps, one-eighth of a grain of morphia and two or three grains of quinia, or more if necessary. I seldom leave any instrument in the urethra; I believe that this is not often necessary. A catheter, at the best, is but a foreign body, and its presence frequently will produce irritation and give rise to the very symptoms you would most avoid. Soothing applications to the supra-pubic region and to the perineum I like much. You may employ very light hot cataplasms dashed with laudanum, or the old-fashioned excellent hop-poultice.

You have thus done everything to avert a chill. If it should come, you will have the satisfaction of honestly believing that it was unavoidable. You can only administer hot stimulus, apply hot-water bottles and dry warmth generally, and prepare to carry your patient through the next weakening stage as best you may. How will you treat the sweat? Here you must rely chiefly upon morphia and quinia. If regularly given and persisted in, the controlling effect of this combination will very soon be recognized. The muriated tincture of iron would seem at first sight to be peculiarly adapted to the sweat, but its tendency to increase rather than to allay the gastric irritability renders it objectionable. As a local application I would recommend frequent sponging of the entire surface of the body with strong tepid alum-water. This will be found very grateful to the patient, and really seems to exert some effect upon the excessive diaphoresis. The nausea, and especially the vomiting,—such marked features in this stage of the affection,—can best be controlled by the internal administration of a few drops of chloroform, and by the application of mustard-plasters upon the pit of the stomach.

The selection of the proper *diet* is a matter of great importance. I have already spoken of the loathing of food, and of the tendency of the stomach to reject its contents upon the slightest provocation. I advise you, therefore, in this matter to rely at first chiefly upon iced milk and milk-punch. If carefully administered in small quantities, these will usually be retained; and a little later, as the stomach loses somewhat of its irritability, beef-essence, well made, may be attempted. If you find that this is not rejected, you may then regard your patient as on his way to convalescence. The distressing thirst can be best allayed by the free administration of iced lemonade, or of lemonade to which carbonic acid water, or a small quantity of aromatic sulphuric acid, has been added, varied occasionally perhaps by iced champagne.

Before bringing my remarks to a close, there is one other piece of advice which I would offer you; and that is carefully to abstain from all instrumentation upon the urethra of your patient until the irritative symptoms shall have passed away. By doing otherwise you can effect no good, and there are a thousand chances to one that you will increase the already-existing evils. Remember, gentlemen, the old adage that "a meddling midwifery is bad;" and believe me that it is possible to meddle with a urethra in its tribulation with no better a result than that which falls usually to the lot of meddlers elsewhere.

CHLORAL CONTRA-INDICATED IN SURGICAL INJURIES AND OPERATIONS.—Dr. John Neill, of Philadelphia, briefly reports, in the *American Practitioner* for February, 1872, a case of gunshot-wound in a boy aged ten years, in whom there was reason to believe that great depression had been produced by the use of chloral. Great improvement took place when it was substituted by morphia.

ORIGINAL COMMUNICATIONS.

FIBRO-CYSTIC TUMOR OF THE UTERUS,
SUPPOSED TO BE OVARIAN.

REMOVAL—RECOVERY.

BY HUNTER MCGUIRE, M.D.,

Professor of Surgery in Virginia Medical College, Richmond, Va.

L. C., æt. 24 years, a cook, married, from Fredericksburg, Va., was admitted to the College Infirmary July 18, 1871, with a large smooth abdominal tumor of five years' growth. She gives the following history: Menstruation began at fourteen years, and, except the interruptions caused by pregnancy or lactation, has continued regularly to the present time. Has never had dysmenorrhœa or menorrhagia. Has had two children, both now living; no miscarriage. After the birth of her first child, five and a half years ago, she discovered a tumor about the size of a hen's egg in her left iliac region. In eighteen months from the time she first noticed it it grew to about the size of a goose-egg, was painless, hard, smooth, and apparently very loose in the abdomen. She could pull it up and make it nearly touch the costal cartilages, or let it gravitate into the pelvic cavity beyond the reach of her fingers. She could feel it move about when she changed her position in bed. Becoming pregnant again, the tumor disappeared until after the birth of her second child, when it was found to have grown to about the size of a coconut. The enlargement continued slowly until about six months ago, when it began to increase rapidly, and soon rendered her unfit to continue her work as a cook. Until disabled by this tumor she had been a strong healthy woman, rarely ever sick, and with no hereditary predisposition to disease.

Upon examination the thoracic organs were found healthy, appetite good, bowels regular, urine normal. She was somewhat anæmic, and her face sad and depressed. The circumference of her abdomen at the umbilicus was forty-one inches; from ensiform cartilage to pubis sixteen inches. The tumor is smooth, except in the left iliac region, where its surface presents some slight irregularities. It is quite mobile, and when pressed against the anterior abdominal walls a slight crackling noise or crepitation is felt and heard at a short distance. Fluctuation above the umbilicus is very distinct. In the right iliac region it is not so plain, but certainly present. In the left iliac it is very obscure, if felt at all. The uterus is in its natural position; sound enters three (3) inches. The organ is mobile, but when moved imparts no motion to the tumor. Examination with the finger, by the vagina and rectum, shows the pelvic cavity filled with a dense hard mass, slightly movable, and when moved giving some motion to the abdominal tumor.

Diagnosis.—Ovarian tumor, composite in character. The sixth day, at my request, the case was examined by Professors Wellford and Cunningham and Drs. Thomas and Fairfax, of this city; and, although there was some difference of opinion as to its exact nature, they agreed that the tumor was ovarian, and advised an operation. The woman was exceedingly anxious to have the operation performed, although fully aware of its danger. She knew that a patient from whom I had removed a large ovarian tumor had died in the hospital two days before she arrived here; but the fact did not alter her determination to have the operation performed, nor lessen her sanguine expectation of recovery. Throughout her long and painful sickness she never for one moment despaired of getting well.

A full dose of castor oil was given the day before the operation, and the patient's bowels were still further relieved by an enema the next morning. July 24, assisted by Drs. Thomas, Cunningham, Wellford, Taliaferro, White, and Upsher, and in the presence of a large number of medical gentlemen of this city, chloroform was given and the operation performed. The usual median incision, three and a half inches in length, was first made. The sac exposed was evidently very thick, and darker than usual. No adhesions were found with the finger or with a long steel sound, except in the left iliac region. Spencer Wells' trocar was passed into the cyst, and eighteen (18) pints of dark-brown fluid discharged. As the contents of the tumor escaped, compression of the abdominal walls was made by the hands of the assistants, and the thick cyst-wall collapsed and

was thrown into several large folds. Finding it would be impossible to remove the mass through the abdominal incision, the opening was enlarged to the umbilicus, and afterwards the incision carried one inch above that point. The adhesion in the left iliac region was now examined, and found to be a broad fold of peritoneum containing a portion of the small intestine. It was very vascular, and was spread out like a wing over the left side of the cyst. A strong silk carbolized ligature was thrown around this adhesion and tied. In course of the subsequent manipulations to find the exact attachment of the cyst, this ligature slipped, and ten or twelve ounces of blood were rapidly lost. Two silver-wire and one thread ligature were now employed, and the vessels secured. The ends of the thread ligature were cut off, and the wire ligatures were twisted, the ends cut off and turned down. The cyst was then lifted from the abdominal cavity, and its pedicle, which was attached to the left side of the fundus of the uterus, crowded into Atlee's new clamp. The cyst was then cut away, the abdominal and pelvic cavities cleansed, and the wound closed with silver-wire sutures, the deep stitches including the peritoneum.

The operation lasted two hours.

The weight of the cyst was eight pounds; adding the nine (9) quarts of fluid, the weight of the whole mass was about thirty pounds. The tumor was evidently a fibrous growth which had undergone cystic degeneration. The cyst-wall varied in thickness in different places; that portion situated above the umbilicus was about one-fourth of an inch in thickness, in the right iliac region from three-fourths of an inch to one inch in thickness, and in the left iliac region the wall was nearly two inches thick. About one and a half pounds of decomposed fibrine was found in the cyst after its removal.

Reaction came on gradually after the patient was put to bed, and was complete in two hours. Ice and barley-water were given at short intervals. At 7 P.M., pulse 112; urine, by catheter, 10 ounces. No opium or whiskey given.

July 25.—Slept a little last night. Pulse 124. Slight nausea. Twenty-five ounces of urine passed during last twenty-four hours. Ice and barley-water allowed; no opium or whiskey.

July 26.—Nausea increased. Slept very little. Pulse 150. Abdomen tympanitic and tender. One-half grain of morphia given hypodermically, and one-half ounce of whiskey every two hours. Abdomen to be covered with flannel wrung out of hot water and sprinkled with spirits of turpentine. Wound protected with lint and oil-silk. Urine 17 oz.

July 27.—Tympanites less. Pulse 150. Morphia, one-fourth grain every six hours; whiskey, one-half ounce every two hours; beef-tea and barley-water. Urine 19 oz.

July 28.—Abdomen still tympanitic and tender. Pulse 155 and very weak. Tongue moist. Hot fomentations and morphia continued as before; best French brandy substituted for whiskey. Urine 28 oz.

July 29.—No apparent change. The wound was dressed, and some of her bed- and body-clothes were changed. Pulse 150. Urine 21 oz. Same treatment.

July 30.—Slept right well; says she is better. Pulse 160. Urine 28 oz. Chicken-essence and soft-boiled egg in addition to the beef-tea.

July 31.—Offensive discharge of blood and pus from wound. Carbolie acid (one part to forty parts of water) used on dressing. Pulse 140. Urine 31 oz. Same treatment.

August 1.—Wound looks well; discharge less. Tongue dry. Pulse 145. Urine 38 oz. Asked for chicken-soup, which was given. Morphia and brandy as before.

August 2, A.M.—Rested well last night. Pulse 130. Ate for breakfast two eggs, rice, and coffee. In addition to morphia and brandy, one-half grain sulphate of quinia to be given every three hours.

8 P.M.—Head affected by quinia. Urine 100 oz. in the last twenty-four hours. Quinia omitted; brandy and morphia as before.

August 3.—Clamp came away. Discharge from wound dark and offensive; upper two-thirds of wound closed. Urine cloudy; 102 oz. during twenty-four hours.

August 4.—Gave enema, which moved the bowels very well. Pulse 116. Urine 67 oz. Woman more cheerful. Fifteen drops tincture chloride of iron every six hours, in addition to the other remedies.

August 5.—Had voluntary discharge from bowels and bladder. Pulse 120. Urine 76 oz.

August 6.—Slept some last night after the usual dose of morphia, but the rapid accumulation of urine, requiring the use of the catheter, disturbed her. Catheter used every two hours. Urine in last twenty-four hours 104 oz.

August 7.—Pulse 120. Urine 100 oz. She is still unable to empty the bladder herself, and the frequent introduction of the catheter is painful. Wound healing and discharging less. No tympanites or soreness of abdomen. Chloral substituted for morphia; other treatment the same.

August 8.—Pulse 112. Urine 86 oz. Had mutton-chops and soup, with bread, for dinner.

August 9.—Resting badly, and is very feeble. Some blood and pus discharged from wound. Pulse 116. Urine 100 oz. Brandy stopped, and extract of malt substituted. Bowels moved.

August 10.—Slept well and feels better. Pulse 116. Urine 49 oz.

August 11.—Pulse 104. Urine 76 oz.

August 12.—Slept well. Pulse 108. Urine 81 oz. Bowels moved. Extract of malt in place of the brandy and chloral in place of the morphia still continued.

August 13.—Pulse 92. Urine 68 oz. Stronger and more cheerful.

August 14.—Wound contracting. Bowels moved. Pulse 92. Urine 74 oz. Appetite good.

August 15.—Pulse 90. Urine 76 oz. Woman better and stronger.

August 16.—Pulse 90. Urine 64 oz. In addition to other remedies, gallic acid was given to-day.

August 17.—Pulse 108. Urine 100 oz. As gallic acid did not diminish the quantity of urine, it was discontinued. The malt and chloral were continued, and fifteen drops of tincture of chloride of iron given three times a day, after meals, and fifteen drops of aromatic sulphuric acid, with two drachms of tincture of cinchona, before meals.

August 18.—Resting well. Appetite good, and strength increasing. Pulse 98. Urine 90 oz.

August 19.—Pulse 96. Urine 64 oz.

August 20.—Pulse 88. Urine 48 oz.

From this date she continued to improve until August 30, when she was able to leave her bed and walk about the room.

September 3.—Discharged from the hospital. She is now able to walk up and down two flights of stairs, and to wait upon herself. The wound has nearly closed; discharge from it very slight. The urine diminished in quantity until August 30, when the amount was normal. It was repeatedly examined during her sickness, and on two occasions (August 6 and 9) was found to contain pus in large quantities. August 6 the quantity of pus was so large and suddenly produced that I was under the impression that an abscess had formed and opened into the bladder. With the exceptions of the presence of pus and the unusual quantity of water, there was nothing unnatural about the urine. One of my friends—a very excellent chemist—discovered oil; but, as this substance was used upon the catheter when introduced into the bladder, its presence was easily accounted for.

October 30.—Lucy called at my office to see me to-day. The silk ligature had made its appearance at the wound, and came away after a little traction. Except the small opening occupied by the ligature, the wound has closed. The cicatrix is very much depressed, and looks as if it was under the influence of some traction from within the pelvis. The bottom of the scar is an inch below the level of the healthy skin around it. She looks well and strong.

December 30.—A letter from Mr. Carter, of Fredericksburg, received to-day: "Lucy is now employed by me; does the cooking for my family and a little light washing for my daughter. She is very well."

Another letter from Fredericksburg, received February 17, 1872, says that Lucy is still at work cooking and washing, and that she is very well.

I am indebted to Dr. Taliaferro, Superintendent of the hospital, for the great care and attention he gave to this case; and to Dr. H. Thomas, for his valuable assistance. He visited the woman daily, and sometimes, during my absence, directed the treatment.

All systematic writers that I have been able to con-

sult upon the subject of ovarian cysts and fibro-cysts of the uterus agree that a positive diagnosis between these affections is not possible. Thus, Graily Hewitt says, in his work on "Diseases of Women," fibro-cysts of the uterus "are very rare, and it seems almost impossible to say how they are to be distinguished from cases of ovarian tumors during life." Mr. Spencer Wells makes the following statement: "Even after an exploratory incision, I know of nothing but a rather darker—less pearly-blue—aspect of the tumor which would put the surgeon on his guard." Mr. Baker Brown says, "The diagnosis between these very rare tumors and encysted ovarian disease must be more difficult than in the case of solid tumors. Indeed, I know of no distinguishing marks between the two." In a very valuable and interesting paper, from which the above extracts from authors have been taken, republished from the *New York Medical Journal* (November, 1871), upon The Diagnosis of Ovarian Tumors from Fibro-Cystic Tumors of the Uterus, by C. C. Lee, M.D., of New York, nineteen cases of operations for fibro-cysts of the uterus, by different surgeons, are reported, in eighteen of which they were mistaken for ovarian cysts. The fact that recent investigations of this subject make the diagnosis of fibro-cysts of the uterus really more difficult than it formerly seemed to be is disheartening, but nevertheless true. Thus, Dr. Lee's report shows that three symptoms, upon the presence or absence of which we mainly depended in making a diagnosis, are really of little or no value for this purpose. The first, and most important, because it has so frequently contributed to mistakes in diagnosis, is menorrhagia, which "is seldom found to exist in fibro-cystic disease." The cases reported show that flooding rarely precedes or accompanies this affection.

Independent mobility of the womb, to which much value has been attached, "really indicates nothing but the absence of pelvic adhesions;" "and lastly, the uterine hypertrophy, or increased length of the cavity, upon which much reliance has been placed, is shown to be of very doubtful value by Dr. Routh, who has found the greatest amount of elongation in certain ovarian cases." Dr. Lee is entitled to the thanks of the profession for presenting these facts so ably and conclusively. A knowledge of them will certainly serve to prevent some of the errors of diagnosis heretofore committed. I propose, however, to examine the points of difference between ovarian cysts and uterine fibro-cysts which Dr. Lee gives as the sum of all our knowledge upon this subject, so far as differential diagnosis is concerned:

IN OVARIAN CYSTS,

1. Disease may occur at any period, even before puberty.

2. Development rapid: usually under two years.

3. Aspect of face unaltered if general health be fair.

4. Fluctuation equable over whole surface of tumor.

5. Vaginal examination shows little displacement of uterus; mass smooth and distinct from uterus.

6. Mobility of uterus independent of tumor from beginning. Pelvic adhesions rare.

IN FIBRO-CYSTS OF THE UTERUS,

1. Scarcely ever occurs under thirty,—generally from forty to fifty.

2. Development slow: generally over two years.

3. "Facies uterina" generally marked. Expression anxious and dejected.

4. Fluctuation confined to certain regions,—generally to upper portion, while lower is hard and dull.

5. Vaginal examination shows uterus high up or displaced; mass either not detected or continuous with uterus.

6. Independent mobility of womb confined to last stage of disease. Pelvic adhesions common.

IN OVARIAN CYSTS,

7. Tapping causes complete collapse of unilocular cysts; in polycystic tumors it reveals the endocysts.

8. Fluid clear, straw-colored, serous; or viscid, clear, mucoid, albuminous.

9. When exposed by gastrotomy, sac is pearly-blue or white and glistening; rarely vascular.

IN FIBRO-CYSTS OF THE UTERUS,

7. Tapping causes only partial collapse, leaving base of tumor firm and indurated.

8. Fluid brownish, bloody, sero-purulent, muddy; or thin, yellowish, containing shreds of lymph or cholesterin.

9. Exposed sac dark, vascular, thick, and frequently fasciculated with fibrous bands.

In regard to the *first* point, Dr. Lee's table shows two cases of fibro-cysts of the womb occurring in women under thirty years of age. Add the case just reported, and we have three out of twenty cases under thirty. This fact renders this rule almost valueless.

Secondly, as to the slow or rapid *development* of the growth. It is well known that a subperitoneal fibroid may undergo cystic degeneration and increase as rapidly as an ovarian tumor. There is nothing, then, in this fact upon which the surgeon can rely.

Thirdly: aspect of face.—It would be very difficult to distinguish true "*facies uterina*" from the face of one who is anxious and depressed at the prospect of a dangerous surgical operation, or of one whose health has been impaired by long-standing ovarian disease.

Fourthly: fluctuation.—In a multilocular ovarian tumor, partly fluid and partly solid, such as the foregoing case was supposed to be, we would expect to find fluctuation confined to certain regions, and the lower part hard and firm.

Fifthly: vaginal examination.—In the case reported the uterus was little, if at all, displaced; the mass was detected through the vagina, and apparently not continuous with the uterus.

Sixthly: mobility of uterus.—The surgeon generally sees the case in the last stage of the disease, and can rarely get any previous history except so far as the patient herself can furnish it.

Seventhly: tapping.—This is a valuable test, but certainly attended with danger. The peritoneum would not bear the presence of a portion of the contents of a fibro-cyst of the uterus as it would the fluid of an ordinary ovarian cyst, and it would be almost impossible to avoid the escape of some of the fluid into the peritoneum. In a case reported in the *London Journal of Medicine* for July, 1850, by Mr. Hewett, and referred to by Baker Brown in his "*Surgical Diseases of Women*," p. 191, American edition, symptoms of low peritonitis appeared two days after tapping a fibro-cyst of the uterus, and the patient died on the eighth day. Fifteen pints of thick reddish fluid, with blood and flakes of lymph, were drawn off.

Eighthly: character of fluid.—This too is a valuable test, but dependent on the last.

Ninthly: appearance of exposed sac.—Also valuable, but the operation not free from danger.

I believe, then, that, with the exception of the uncertain "*facies uterina*," we have no means of diagnosing a fibro-cyst of the uterus from an ovarian cyst, except by an exploratory incision and an inspection of the sac, or by the more dangerous procedure of tapping and an examination of the contents of the tumor.

A DOUBLE MONSTER.—Dr. Alexander Klein reports, in the *Wiener Medizinische Presse* for December 24, 1871, a case of this kind resembling that reported by Dr. William Goodell in vol. i. p. 332 of this journal, except that instead of three there were four perfectly-developed lower extremities.

The children were born September 6, 1871, in Hungary.

BRONCHIAL DILATATION IN FOWL.

BY W. H. WINSLOW, M.D.

IN vol. i. No. 14 of *The Medical Times*, I called attention to a singular rupture of the bronchus of a wild duck, and the subsequent efforts of nature to occlude the opening. Since then I have examined many specimens in fowl, and have lately found in the tame duck two well-marked cases of excessive dilatation of the trachea at the division into the bronchi. No ruptures had occurred, yet the last two rings of the trachea, in both instances, were joined homogeneously together and enormously hypertrophied and dilated. Upon the left side of each a pouch sufficient to hold f3iij had been formed, oval in shape, and projecting outwards and upwards about two diameters of the main tube. The outermost portion of the pouches was much thinned, and probably would have soon ruptured. The material of their walls was almost pure cartilage, covered by minute lines in variegated patterns. Extending partly over this were the layers of fibrous tissue prolonged from the outer layers of the trachea. Some obstruction had evidently occurred, which had been overcome by this successful attempt to increase the diameter of the tube. The foreign body had lodged in the left bronchus, *au contraire* to such lodgment in human beings,—which is singular only from the fact of its having occurred in these three cases upon the same side; because the bronchi of a duck, and, indeed, of most fowl I have examined, are of the same size, and their attachment to the trachea seems to be at the same angle on either side. There would appear to be a tendency to easy dilatation in these parts among the feathered tribe, and an easy accommodation of the breathing-apparatus to obstructions, probably occasioned by their omnivorous habits. The longitudinal muscular fibres of the trachea are beautifully shown in these animals, and such dissection is pleasant and instructive to the anatomist, as well before roasting as afterwards. Should the Society for the Prevention of Cruelty to Animals prevent us from studying physiology and anatomy *au naturel*, we can still find some comfort in consulting the cook and the market-basket.

ON NATURE'S LOTION AND ITS IMITATION BY ART.

BY FREDERICK P. HENRY, M.D.

IT has long been a matter of common observation in medical and surgical practice, that the curability of a disease bears an inverse ratio to the number of remedies recommended for its treatment. It is unnecessary to give examples in support of this position, for I do not think it is contested by any one. The fact is easily explained: the pathology of the disease is not understood, and the treatment is therefore empirical; every man has his own theory and his own mode of treatment.

In the matter of surgical dressings, empiricism has long been, and, for aught I know to the contrary, is still, the rule. This may at first sight appear to be an exceedingly bold statement; but is it not the fact that every surgeon has his favorite dressing? Multiplicity of dressings in surgery implies empiricism in that department of the healing art, as does multiplicity of drugs in medicine. One surgeon prefers cerates, another water-dressings, a third applies oil or laudanum, or a solution of carbolic acid, while still another believes firmly in the *vis medicatrix* of our mother earth. The results from all of these applications are declared to be good; so perhaps were the constitutions of the patients in whose cases they were used. Nature accomplished the cure, and the dressing got the credit of it.

Anything new, recommended by high authority, is seized upon with avidity, showing how limited was the confidence reposed in the former modes of treatment. Witness the case of carbolic acid, the use of which in surgical dressings is now comparatively limited.

Now, it is in the study of nature that advance in medical science is most surely and rapidly made. What is nature's lotion for wounds, ulcers, or contusions?

The saliva. A child who cuts or bruises his finger puts it in his mouth: indeed, adults naturally do this. In the mouth it is bathed by the warm saliva, and a certain amount of relief from pain is quickly obtained. Some of the lower animals lick their sores constantly until they are healed. It would seem, therefore, *a priori*, that an application to wounds or ulcers resembling as closely as possible the saliva would be beneficial. The soothing and healing influence of the saliva is probably owing to its three principal characteristics,—namely, its warmth, its slight viscosity, and its alkaline reaction. Any one will perceive that a fluid closely resembling the saliva in these respects could be artificially compounded, with little or no difficulty. The warmth could be retained as it is in the ordinary water-dressing,—the body itself preserving the temperature of the lotion as it preserves the temperature of the saliva in the mouth. Viscidity could be imparted by albumen,—which, indeed, exists in the saliva as well as its proper organic substance, ptyaline,—and alkalinity by soda, lime, or potash, or all three together.

I do not consider that any objection to the argument lies in the fact that ulcers frequently occur in the mouth, especially in children. In such cases digestion is invariably impaired, and the constitution of the saliva—one of the digestive fluids—is probably vitiated.

I have had no opportunity of testing practically the value of a lotion such as I have, in general terms, described; but, as it seems to savor less of empiricism than the applications ordinarily made use of, it is to be hoped that a trial of it will not be neglected.

ABSTRACTS.

BY ROBERT STONE, M.D.,

Irvington, N.Y.

A FEW CASES OF PLASTIC OPERATIONS ON THE SKIN.—Drs. Heiberg and Schulz (*Berlin. Klin. Wochenschr.*, No. 10, 1871) transplanted in fifty cases portions of skin upon granulating wounded surfaces, of which the greater portion healed completely. Among these latter were seven flaps of skin taken from other persons. In the majority of the successful cases of transplanting, the piece varied in size between a lentil and a sixpence sterling; where it was more extensive the transportation invariably miscarried. The writers advise the employment of a fenestrated forceps for seizing the flap of skin, as they had repeatedly observed a central mortification of the flap when it had been seized with the ordinary forceps. For fixing the flap, where the wound is below the level of the surrounding skin, they advise loose cotton-wool laid under the adhesive plaster; for when charpie is used a displacement more easily occurs. In two cases where, on the second day, the piece of skin was found swimming in pus, they succeeded, after previously exciting the granulations, in readjusting the flap of skin and obtaining a healed wound. The first change of dressing should be on the third day, the second on the sixth. In the cicatrized flap on the seventh day a constantly-increasing epithelial line is observed, lying somewhat below the level of the surrounding granulations. Sensibility was not restored in the transplanted portion after five weeks.

Dr. Rauke, in the *Bayer. Aertz. Int.-Bl.*, No. 8, 1871, describes a carefully-observed case of transplanting in a girl six years old. She had received a severe and extensive burn on July 3, and came under treatment December 2. The cicatrization became arrested, as the doctor attested by repeated examinations, during nine days. On December 12 two transplantings were made at the following points: on the inner side of the left upper arm there was an ulcer three centimetres broad and three and a half centimetres long, and at the corresponding region of the thorax an ulcer five centimetres broad and four centimetres long. The upper arm and the breast had grown together as far as the angle formed by these two granulating surfaces; the arm could therefore be moved only to 45° from the body. The flap of skin was then attached in the neighborhood of the upper edge of the thoracic ulcer, in order to counteract as far as possible any further growing together between the arm and the side. The flap took hold, and there also appeared an increased activity in the process of cicatrization over the rest of the wounded surface. On December 20 a thick layer of epidermis was thrown off from the transplanted locality, so that this latter appeared deeper than the surrounding skin; but the healing process went on, and on January 7 (that is, after twenty-seven days) the cicatrization was complete and all further growing together of the two surfaces guarded against.

PESSEMA, A NEW SKIN-DISEASE.—Beigel, in *Virchow's Archiv*, vol. xlvii, pp. 367-370, has described a disease of the skin which he calls papilloma area-elevatum. The patient, aged one year, presented, on the face, arms, and legs, elevations about an inch in diameter, upon which crusts formed, and, upon the removal of the latter, a spongy state of the tissues was disclosed.

Dr. Berg (*Deutsch. Klinik*, No. 15, 1871), about a year before this, had observed the following case: A prostitute, forty-seven years old, who had suffered repeatedly from syphilis, presented on November 25, 1868, on the face, an eruption which might be compared to that of variola, with enormous pustules. The elevations were of the size of a large backgammon-counter, were covered by skin, regular, of a smooth surface and yellow color, were hard to the touch, and were surrounded by a red areola. Pressure detached the thin covering of skin, and there issued a few drops of pus from a mass of minute depressions; on removing the pus an injected reticulated tissue was exposed. The right side of the forehead presented two such elevations; the left, a number of smaller ones; on the face were several of equal size with those first mentioned, from twenty to twenty-four millimetres in diameter. The hairy scalp presented a few abortive pustules. Upon the point of the tongue was a single pustule; upon the sternum were two pustules of the size of a pea.

During the following days the elevations on the face enlarged, and on the trunk several new ones appeared. Nine days from the commencement the elevations on the upper part of the face began to dry up considerably, while those on the lower part remained unchanged; the crusts of the former soon fell off,—the scars being in some cases slightly elevated, in others slightly depressed. Then followed similar crusts on the remaining pustules. About four weeks after the first observation, all the crusts on the face had fallen; the resulting scars were smooth, not depressed,—like slight pock-marks, only of greater dimensions. Those on the trunk followed the same course. On February 8, 1869, the patient was dismissed cured.

Six months later the patient died of morbus Brightii. At the post-mortem examination reference was had to the evidences of syphilis only; in the ossa parietalia

and in the os frontis was found inflammation, and, besides this, pachymeningitis.

The author had extirpated, previous to death, a portion of one of the elevations, and examined this, as well as a portion hardened by chromic acid, under the microscope. The piece, washed in distilled water, presented a granulated tissue; small round granulated cells, with one or two slightly-granular nuclei; the cells lay close together in a slight structureless intermediate tissue. Numerous capillary vessels made the similarity to the granulations of wounds complete; on picking apart minute shreds of the chromic acid section the vessels remained behind as a fine close network with elongated meshes. The papillæ were not included in the section, but the author believes that they are hypertrophied in this affection.

In regard to the etiology, the author calls attention to the fact that, a half-year previous to the appearance of the eruption, the patient suffered from a severe headache, which was decidedly increased a week before the eruption, and then disappeared. (The boy-patient of Beigel was attacked, before the appearance of the eruption, with convulsions, which then ceased.) Dr. Berg suggests a vaso-motor neurosis; he does not regard the syphilis as the producing cause. Therapeutically, he says, there was no call for active treatment. Cataplasms of cold water, and subsequently, as the crusts began to form, compresses with oat-water, lead-water, and applications of the lunar caustic, were employed.

Beigel called the disease papilloma area-elevatum; but, since a hypertrophy of the papillæ occurs in the most dissimilar eruptions (and in the one in question it has by no means been confirmed), Dr. Berg rejects this appellation, and prefers, in consideration of the resemblance of the elevations to checker-men (πασσός), the name pessema, since our slight knowledge of the pathological anatomy of the diseased state of the skin does not permit of our adopting a name derived from the diseased process itself.

ON THE ACUTE ANÆMIA OF PREGNANCY.—Professor Gusserow (*Arch. f. Gynæcol.*, ii. 2, 1871) saw in his clinic, in the years 1868 to 1870, five cases of the most intense anæmia in pregnancy, all of which ended fatally. The histories of the patients, as well as the post-mortem evidences of these cases, which are given in the most extended detail, are completely similar. In all an intense anæmia was developed at the latter half of gestation, without any apparent cause; in all the birth was premature (about the eighth month); and, although this occurred easily and without hemorrhage, death followed speedily,—in one case even before the expulsion of the placenta,—in spite of all therapeutic measures, even transfusion. The autopsy presented nothing but a high degree of anæmia and hydræmia.

Now, if we assume—what is generally the case—that the normal state of the blood in pregnancy is that of anæmia and hydræmia, we are inclined to regard the above condition as a pathological increase of a physiological condition. Besides this, the absence of every other etiological cause and the parallel increase of the disease with the progress of the gestation render it very probable that this high grade of anæmia is dependent, although in some unexplainable manner, upon pregnancy itself. Arterial transfusion in similar cases might succeed. Dr. G. suggests the induction of premature labor in such cases, with, at the same time, one or two transfusions.

ON PUERPERAL FEVER.—Martin says (*Berl. Klin. Woch.*, 32) that the true fundamental cause of child-bed fever is always a diphtheritis of the external or internal genitals, whose direct products may disappear so rapidly that they are not discoverable in the cadaver. The opaque serous infiltration of the periuterine connective

tissue never occurs primarily, but is always the consequence of diphtheritis. An autochthonous origin is highly improbable. According to recent observations, the disease originated in places where its transmission could be explained by the decomposing purulent remains, or in consequence of a previously-existing gonorrhœa.

TROPHIC DISORDERS CONSEQUENT UPON PERIPHERIC INJURIES.—Dr. Schiefferdecker gives the results of six cases:

1. Gunshot-wound in the left lower arm; the ulna splintered, ulnar artery and nerve injured. After recovery, paralysis of the extensors of the lower arm, the last finger strongly flexed; severe continuous pains in the limb, often accompanied by creeping sensations. Sense of touch impaired. Marked atrophy of the muscles. The skin raised in a fold, thicker and harder, of a browner color, reddened in spots; great desquamation, and hair and nails atrophic; an increased secretion of strong-smelling sweat; the temperature, subjective and objective, cooler.

2. Gunshot-wound of right upper arm, without injury to the bone. Immediately after the injury the fingers contracted; later on, creeping sensations, and disintegration of the epidermis in strips. After a few weeks, a swelling of the size of a bean was perceptible on the median nerve. Skin harder and thicker, and of browner color. Growth of hair increased, nails curved like claws, increase of sweat, temperature cooler.

The remaining four cases presented entirely similar trophic disorders, except that the copious desquamation of the epidermis and its deeper coloration were absent in three cases.

Dr. S. calls attention to the fact that the majority of the ascertained disorders (atrophy of the muscles, thickening of the skin and its deeper pigmentation, desquamation, increased growth of hair, and lowering of the temperature) occurred *above the seat of injury*.

As cause of the above, like Samuel in the case of the secretion of the nails and hair, Dr. S. attributes it to a disorder of the trophic nerves. As for the other phenomena, he argues, with Leyden, as follows: that the same amount of nourishing material is brought to the injured atrophied limb as in a condition of health; and now, as by the muscular atrophy a decided diminution of the needs for material occurs, an excess of nourishing material is present, and these passing to the account of the skin and the epidermoid tissues, the latter become hypertrophied.

EPILEPSY FROM GUNSHOT-WOUND, AND CURE BY OPERATION.—In a gunshot-fracture of the lower thigh (*Allgem. Med. Centralztg.*, No. 53, 1871), at the time of cicatrization epileptic attacks occurred. Three months later the patient came under the hands of Dr. Marten. The attacks had meantime continued uninterruptedly several times a day. The fracture was already consolidated; at two points, however, there were fistulæ leading to a fissure in the bone at the point of fracture, in the interior of which some loose fragments of bone were recognizable. The fractured bone between the fistulæ was removed, and the cavities were cleared out. During some weeks the attacks still appeared, in a much milder form, and then absented themselves entirely.

ON A NEW METHOD OF ARTIFICIAL RESPIRATION WITHOUT TRACHEOTOMY.—Horvath, of Vienna (*Centralbl. Med. Wiss.*, No. 50, 1871), says that in all physiological experiments for the production and continuance of artificial respiration, until now, tracheotomy and the introduction of a T-shaped canula, etc. have been taken for granted. We thus see how closely artificial respiration has been connected with tracheotomy, and how little other methods for the continuance of artificial

respiration without tracheotomy have been employed, although they have been long known and recognized as among the means of restoring animation. In the author's experiments with chilled animals he investigated, among other means, artificial respiration for the purpose of sustaining life, and also employed tracheotomy. In order, however, to obtain the isolated effects of cold upon the animals without any possible commingling of results, he sought a new method, and attempted to effect respiration by means of a catheter introduced into the trachea. After repeated experiments, the author hit upon a new method of producing artificial respiration without tracheotomy or any injury to the animals, and by this simple method to retain the animal alive. In one case in the country, in the absence of any of the necessary apparatus, he insufflated air simply by means of an air-bladder with a flexible tube inserted into the nasal passages. After each insufflation and consequent rising and sinking of the belly it appeared that the lungs distended themselves, and that artificial respiration could be thus effected. It was subsequently tried with success upon other animals.

The method is very simple, and is as follows: A short india-rubber tube, as thick as the finger, is connected by one end with the air-bladder and by the other is fixed upon the nasal openings so that the extremity of the tube as nearly as possible covers the nasal openings, and then the air is insufflated. The mouth at the same time is more or less open. The surplus air which does not reach the lungs escapes by the mouth, which thus provides against any possible rupture of the lungs.

The author further took a medium-sized rabbit, so fully curarized that it was entirely motionless, showed no reflex corneal sensibility, and the most powerful current through the ischiatic nerve produced no muscular contractions. Thereupon this plan of artificial respiration was employed, and it succeeded in retaining the animal in life with energetic cardiac contractions for fifty-four minutes. The same favorable results were obtained in a strongly-curarized dog for the space of one and one-third hours, and in a guinea-pig for twenty minutes.

All the animals were kept alive as long as the artificial respiration was employed, which was interrupted after from twenty to forty-five minutes because that time appeared sufficient to demonstrate the feasibility of the new experiment. Finally, as a proof of the deep curarization of the animals, they all died without convulsions.

In the absence of tubes of proper shape and size, the author used on one occasion a glass funnel, whose broad opening was then affixed to the nasal openings with the same effect upon the respiration.

It was observed in one case in a dead guinea-pig, that the cavity of the chest did not expand with strong insufflations, in proportion to the latter, and the *alæ nasi*, instead of distending as usual, collapsed. It appears, therefore, that neither the one change nor the other is needful in the process to make it universally feasible. As many cases are now known in which the induction of artificial respiration is the only remedy, and yet in the want of a physician or of suitable apparatus it cannot be resorted to, it is to be wished that this method will be used in human subjects.

The occurrences of a recent period, where, from the want of artificial respiration, persons have died in the presence of accomplished surgeons, or where the patients have paid with their lives for the momentary hesitation of the surgeon as to whether tracheotomy should be performed or not, or where the operation has been commenced on the living patient and has ended on the cadaver,—all these prove clearly the necessity for a good method of artificial respiration, and have induced the author to announce the results of his method.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

SERVICE OF DR. GEORGE STRAWBRIDGE,

JANUARY 18, 1872.

Reported by Dr. CHARLES B. NANCREDE.

DR. STRAWBRIDGE stated that this clinic would be occupied by the consideration of some common affections,—viz., obstructions of the lachrymal apparatus. These are frequently met with, and are quite as frequently troublesome cases to treat. Formerly such affections were so poorly understood, and the variety of treatment recommended and practised was so great, that all operative interference fell into disrepute. Now we are able to treat these troubles very successfully. A few words must first, however, be devoted to a description of the anatomy of the lachrymal apparatus, before we can properly understand the treatment of its diseases.

First, then, we have the lachrymal gland, with which, in the present connection, we have but little to do, and which resembles any other racemose gland. It is situated between the superior and external recti muscles, in a depression of the external angular process of the frontal bone at the superior external angle of the orbit, being in relation by its inferior surface with the eyeball, by its superior with the frontal bone. This gland supplies most of the tears, although probably not all, since the conjunctiva would seem to be also a source of this secretion. The tears reach the surface of the eye by six or seven short ducts. Now we come to the portion of the lachrymal apparatus which most interests us at present, and we divide the parts into—first, the puncta; second, the canaliculi; third, the sac; and fourth, the duct. The puncta we can best see, by looking either at our own eyes in a glass or at those of a friend, as little black spots at the internal angle of the lids, brought into view by slightly everting them. These openings lead us into the next portions, called the canaliculi, by means of which the tears are conveyed from the surface of the globe into the lachrymal sac. They are very small canals, lined by a delicate membrane. In the diagrams we see them represented and their course shown. Taking, for instance, those of the lower lids, we see that at first their course is directly downwards for about one-half a line, when it forms an abrupt angle and runs slightly obliquely upwards and inwards to the sac, which we must next examine. This is composed of a fibro-elastic coat lined by mucous membrane, continuous above with the conjunctiva by the canalicular lining, below with that of the nose. It is about two lines in length, one line in breadth, and two and a half lines in its antero-posterior diameter. Now we have arrived at the last and, for our present purpose, most important portion,—viz., the duct, which extends from the sac above to the inferior meatus of the nose below, and is about an inch in length. Its course is downwards, backwards, and slightly outwards, varying in this last respect according to the width of the bridge of the nose,—a fact worthy of note, since it gives us some clue as to the direction in which to push our sound when once entered. The broader the bridge, the less is the inclination outwards. This duct is a bony canal lined by mucous membrane, its walls being formed by the superior maxillary and lachrymal bones, the latter being very thin; so that it will readily be seen how easily, unless care is exerted, the bone may be perforated. This accident is especially liable to occur in dilating dense fibrous strictures, or where there is calcareous deposit.

One of the most common affections of this portion of the ocular apparatus is that usually denominated "watery eye," or, technically, epiphora, in which the tears flow over the cheek. Now, of course this latter condition may obtain in a number of diseases,—such as phlyctenular ophthalmia, keratitis, conjunctivitis, etc. In these cases it is due to the irritation of the ciliary nerves, which is reflected to the gland, causing a copious flow of tears. Sometimes, too, this overflow may be owing to the presence of foreign bodies in the eye; of course this is not what is meant by epiphora. When, however, without any of these causes being in operation, we find the watery overflow chronically present, in many cases causing irritation of the skin of the cheeks by the constant maceration,

and even, in some cases, producing eczema, we are warranted in calling this epiphora. In degree it varies from a slight excess of the natural secretion to the worst condition described above.

What is to be done for such cases in the way of treatment? First, a trial should be made of astringent applications, such as the "yellow wash" mentioned at a previous clinic, containing sulphate of zinc, muriate of ammonia, etc., or one composed of zinc alone. If these do not produce the desired effect, open the canaliculus with a Weber's knife, which is to be preferred to the old plan. This knife is probe-pointed, slightly curved, about five lines in length, and one line at its widest part. The point is generally made too large by the instrument-makers, so that it will not enter the punctum. The instrument is to be introduced into the punctum with its point directly downwards for about half a line, then turned at a right angle, or a little more, and pushed on towards the sac, keeping close to the anterior wall of the canaliculus until the point touches the bony wall, when by merely elevating the handle, while the lower lid is kept tense by the fingers of the other hand, the operation is completed. In the old method of performing this, first the canaliculus had to be dilated, then a director introduced, and finally the incision made by passing either a blunt-pointed pair of scissors or a knife along the groove,—thus in reality making three operations, and in the end not doing the work satisfactorily. (A patient was then introduced, upon whom the operation was performed.) By this little operation a larger opening is offered for the passage of the tears, which will generally suffice for the cure of the epiphora.

Now we must consider dacryocystitis, or inflammation of the lachrymal sac, which is the most common cause of stricture of the duct. We first notice a considerable, sometimes immense, tumefaction of both lids, after which a slight prominence appears at the inner angle of the orbit, that continues to increase until about the size of a pigeon's egg. The pain in this affection is oftentimes very intense, in consequence of the unyielding nature of the walls of the sac. In three or four days, the tumefaction steadily increasing, a yellow spot appears at its summit, showing that suppuration has occurred. Pressure now will often empty it of the pus, part passing out on to the surface of the globe through the canaliculi, part into the nose through the duct. The best treatment consists in the application, for a couple of hours three times daily, of hot chamomile-tea, to hasten the suppuration and relieve the swelling. When it points, an incision should be made and the pus thoroughly evacuated. Its reaccumulation should be prevented by keeping the wound open for a time, if necessary.

The best plan of treatment, when this lasts several weeks and becomes chronic, is unquestionably dilatation of the duct after slitting up the canaliculus, followed by the use of astringent injections. For this dilatation Bowman's sounds should be used, which are of six sizes. We need never go beyond No. 4. Now, how are these to be introduced? In this little operation the advantage of being ambidextrous is very great, for then we can sit opposite to our patient no matter which eye is affected. Having seated ourself facing our patient, the sound is to be introduced into the slit-up canaliculus, keeping close along its anterior wall until we meet with bony resistance, for then we are in the sac, touching its opposite bony wall. When this point is reached, the direction must be changed by carrying the handle directly upwards until it rests against the frontal ridge. To gently press the instrument down along the course of the canal is all that is now necessary to complete the operation. This is more difficult to explain than to do. If we doubt that the instrument has traversed the whole extent of the canal, we have only to pass another into the anterior nares, when we should feel the point about one and a half lines within the nostril. The sound should not be passed every day,—every other day, at the oftenest, being sufficient. The effect of this treatment is the widening of the duct. After using the sounds for three or four weeks, astringent injections are to be advised, by means of Anel's syringe, which is merely a small instrument of this description with a long removable point, this latter being in reality a hollow Bowman's sound. In using it the point is to be introduced first, part-way down the duct, after which the syringe is to be attached.

The clinic was closed by showing a number of cases of phlyctenular ophthalmia, introduced, Dr. Strawbridge said, principally because they were difficult ones to examine.

THE LOCAL TREATMENT OF HYPERTROPHIED TONSILS.—Dr. B. Frankel read before the Berlin Medical Association (*Wiener Medizinische Presse*, February 11, 1872) an interesting communication on this subject. He said that in cases in which, from any cause, it was inexpedient to remove the tonsils by the knife, we must have recourse to one of two classes of remedies. 1. Caustics. Of these, he agrees with Prof. Lewin in preferring chromic acid. This should be applied in fine crystals (*Nadeln*) directly to the tonsils. Its application gives rise to little or no pain, is without danger, and produces a considerable reduction in the size of the glands. If great care is not taken, the surface of the tonsils will, however, acquire a lobulated appearance, inasmuch as those parts which have not been reached by the caustic will be unchanged and appear as ridges among the shrivelled portions. Dr. Frankel has, consequently, recourse to—2. Sorbefacients. He has found but little effect produced either by the application of the tincture of iodine by means of a camel's-hair brush directly to the part, or by the use of a solution of iodide of potassium and the atomizer, and therefore recommends that the iodine should be brought immediately in contact with the hyperplastic tissue. To this end he has made use of submucous injection of iodine, which he has never found to fail in appropriate cases. He prefers the solution of iodine in glycerine, as the alcohol in the tincture has a tendency to dissolve the cement with which the glass point of the syringe is fastened to the caoutchouc cylinder. The injection should be made in the following way: The tongue of the patient is to be depressed with a spatula, which should be held in the left hand of the operator, while with the right hand he introduces the point of the syringe into the tissue of the tonsil. So much of the contents of the syringe are then to be injected as may seem to be desirable. No pain is caused during the injection or afterwards, unless the instrument has penetrated into the surrounding muscular tissue. There is generally little or no hemorrhage. Care should be taken that the point of the syringe does not enter one of the numerous crypts of the tonsils. This may be known to have taken place whenever the iodine-solution is seen flowing out of the mouth of such a follicle. The injection may be repeated at the end of eight days.

A marked diminution in the size of the tonsil will frequently be observed after the first operation; but to arrive at definite results—i.e. to reduce the gland to the third or the fourth of its original size—it is sometimes necessary to repeat it from twenty to thirty times.

In some cases he also recommends the introduction of small pencils of iodine and iodide of potassium, made up with dextrin, into the mouths of the follicles of the tonsils.

In the discussion which followed the reading of this paper, Prof. Lewin spoke of the great relief afforded by the submucous injection of morphia in acute tonsillitis. The pain is at once relieved by it, and deglutition becomes possible.

THE USE OF NITRATE OF SILVER IN CERTAIN LOCAL INFLAMMATIONS.—Mr. George Cowell (*The Practitioner*, February, 1872) recommends, in the treatment of swelled testicle and carbuncle, the application of the solid stick of nitrate of silver to the skin. In the case of testitis the skin covering the swelled testicle is to be drawn tightly, and, after being moistened with water, is to be freely rubbed with the nitrate of silver. Pain, he says, disappears in from two to six hours, and this is accompanied and followed by a gradual diminution of the swelling.

The *modus operandi* of the application of nitrate of silver in these cases seems to be the energetic stimulation and consequent contraction of the capillaries and small arteries of the parts, whereby engorgement is diminished, the vessels are placed in a condition for returning to a healthy function, and morbid exudation is diminished and removed.

A REMEDY FOR VARIOLA.—Dr. W. Marsden, of Quebec, writes to *The Medical Record*, February 15, to recommend the administration of the balsam of copaiba in the treatment of smallpox. Three drops are to be rubbed up with a little albumen, or mucilage and syrup, and administered three times a day. In a solitary case in which he used it, it acted like a charm, literally arresting the process of pustular development and consequent desquamation, and suspending the disease, leaving not a trace behind, nor a solitary unfavorable symptom, any more than if the patient had not been affected by smallpox.

PHILADELPHIA MEDICAL TIMES.

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EDITORIAL.

THE TIME HAS COME.

THERE are, in this country, few reflective teachers of medicine who are satisfied with the existing system of instruction. Yet he might perhaps be considered thoughtless who should advise the immediate introduction of the methods adopted on the continent of Europe simply because they are intrinsically the best, or afford the means of securing the most thorough education to the medical student. There are many reasons why the latter method is not available to us. Prominent, however, are the demands of the nation, which cannot afford to wait seven years for the education of its doctors, and the deficiency of endowed professorships, with the consequent necessity to teachers of some other source of income than teaching itself. Essentially, private practice becomes that additional source, and in its successful pursuit all know how completely time is absorbed, leaving the subjects of the professorship to be cultivated at odd intervals, and limiting the period of intercourse between teacher and student to a single hour, three or at most four times a week.

The question as to how endowments are to be obtained, or whence they are to come, is irrelevant here. It is sufficient that they do not exist. Nor have we to do with those exceptional cases where an inherited fortune permits its possessor some latitude of action. It is, however, clear that, in consequence of deficient endowment, the union of medical practice and medical teaching, even in what are called the non-practical branches, is essential in America at the present day, and is likely to continue so for some years longer.* It is only very recently that such separation has become possible in London, where the opportunities for obtain-

ing a thorough medical education, it is acknowledged, are vastly superior to any offered in this country. Yet even there the opportunity recently afforded to Burdon-Sanderson, Klein, and Brunton would appear to have been an almost accidental one. Admitting this proposition, however, the important question remaining for consideration resolves itself into one as to the possibility of improving the system of education, even with our present facilities. Our answer is unqualifiedly affirmative. Indeed, we will go further. We hold that not only is it possible to improve, but also that the time has come when to fail to do so is prejudicial to the best interests of the student and of the profession, and to the schools themselves.

With regard to the first, no effort at proof is required. There is no one who has been in the habit of examining students for a degree who can fail to blush when he is asked as to whether the qualifications of the average medical student are such as would make him willing to place a member of his own family under the care of such recent graduate.

That such a condition of affairs is prejudicial to the best interests of the qualified practitioner is plain from the fact that, owing to the deficient education of physicians,—at least as a professional body,—we are in danger of losing that respect which should be extended to the learned professions, while the community, having almost ceased to discriminate between empiricism and rational practice, are, in an alarming number of instances, as ready to intrust themselves to the charlatan as to the educated practitioner. Indeed, it is well known that the former often becomes rapidly wealthy, while the latter will struggle on for years, harassed and embittered by the privations of poverty, until, even when a competence is finally obtained, he is only fit to sympathize with a few choice spirits whose experience has been similar to his own. Society knows him not at all.

It is more difficult, however, to convince college management of the necessity of immediate reform, regardless of consequences, in our plan of medical education. For it is certain that such a radical change as would be required will primarily reduce the income of teachers by increasing the expense of conducting schools, as well as by diminishing the number of pupils. Nor do we think it would be wise to adopt any changes with the expectation that, even ultimately, the income to individual teachers will ever be as great as it once was in Philadelphia. For to secure that close personal relation of teacher and student which is demanded, one of two things is necessary: either the number of students under the direction of a single individual must be diminished, or the proportion of instructors must be increased. But whether the decided pecuniary loss which must be expected to attend reform in the early period of its institution be permanent or not, will depend largely upon the efforts of its instructors,—not simply upon the extent to which they offer facilities, but also upon the fidelity with which they carry them out. Earnest students will not be long in learning where the most thorough instruction can be

* There is, however, at least one branch—that of chemistry—in which such union has been found impossible even in America. And yet, strange to say, in some of the oldest and most successful schools in the country there is no recognition whatever of the principle which grows out of it, that this chair should receive a larger proportion of the fees; the additional sum sometimes paid to its incumbent for performing the duties of Dean being quite inadequate to make up the deficiency resulting from the almost total absorption of time by the duties of his chair. Moreover, it may sometimes happen that the Professor of Chemistry is not the most suitable person for Dean. These remarks occasionally apply to the Professor of Physiology; although he has usually a better opportunity for obtaining private practice, and there is a certain amount of good reason, indeed, why such Professor should be a practical man.

obtained, and will be found willing to assume the additional expense.

A moment's consideration, however, will satisfy us that the pecuniary loss will not be proportional to the reduction in the number of students attending. No one can expect that a term of instruction extending over ten months in a year, and conducted by at least twelve professors, with additional demonstrators, can be carried out for the same sum as one of four months by seven professors and two or three demonstrators. Two hundred dollars a year, or one hundred and twenty per session, as adopted by the management of the Harvard Medical School, would perhaps be a minimum; at this rate one hundred students at two hundred dollars each would return the same income to a college as one hundred and forty-two at one hundred and forty dollars each; while the expenses of a summer term would be greatly less than those of the winter, on account of the diminished consumption of fuel and light.

Moreover, the very fact that in American colleges the professor and practitioner are combined, affords us a means of surmounting this acknowledged obstacle to reform. As a consequence of this union, very few professors in our medical schools are dependent upon their professorships for a livelihood. They are generally in a practice which alone will support them. No one, however deep his enthusiasm, could be asked to support his family upon expectations while he was laboring to build up an improved system of medical education. Fortunately, however, what, considered from some points of view, is a disadvantage, makes such an alternative unnecessary, and takes away any valid excuse for longer delay.

Supposing it admitted that a change in the mode of instruction is demanded, the next question is as to the manner in which such modification should be made. This can be arrived at only by careful deliberation. It has already been stated that the adoption of the German plans would scarcely be wise, if at all possible; at this stage in the history of American medicine. But there is still to be obtained the golden mean which will be adapted to the state of civilization in this country. In general, the mode of instruction at the English hospitals would rather become the model, and, to come nearer home, the plan of the Harvard Medical School seems to embody the germ of a system which is quite within our reach. Details must be left to deliberation and circumstances. But the desiderata are primarily an extension of the term of study, in order that students may not be compelled to attend from six to nine lectures daily, on different subjects, for four months, but that, by attention to three or four departments at a time, they may acquire a sufficient mastery to enable them to pass a satisfactory examination at the end of the year; and in which, having satisfied their instructors, they may pass in a second year to more advanced studies, and thence to a third, which will include what are known as the more practical parts of their curriculum,—clinical medicine, clinical surgery, practical obstetrics, and diseases of women. To be enabled to do this, not only must the

period of study be lengthened and graded, but the number of instructors must be increased, particularly in the practical departments, upon whose courses attendance should be compulsory, and who should have a voice in testing the qualifications of the candidates for graduation. Any extension of facilities to students which must increase the number of hours of daily labor is of questionable propriety. To make attendance upon them compulsory would be cruel to the student, and to make them elective by those who choose to take advantage of them will result in their being attended by a few only. By extending the period of study, however, and properly grading the course, full advantage can be taken of extended facilities, while those engaged in teaching the additional branches will feel encouraged to enthusiasm and more careful effort. Not until the period of study is extended, then, will the very desirable professorships of Clinical Medicine, Clinical Surgery, Pathological Anatomy, Diseases of Women and Children, Dermatology, and Ophthalmology, become available.

Among special modifications desirable, none is more so than that which will make chemistry, physiology, histology, and pathology the subjects of laboratory-teaching. Lying at the foundation of medicine, it is a superficial knowledge of these more than of anything else which is the cause of the digression we too often see among graduates of American colleges from the paths of rational medicine to those of empiricism.

We reiterate that the time has come for reform. Let there be no hesitation on the part of one school because another hesitates to take the step simultaneously. Indeed, this disposition to delay improvement until another has taken a similar step has been a constant obstacle to a true progress in medical education. Apart from the inherent obligation which is binding upon institutions as well as individuals, and which commands progress, the college which is the first to make the change will be the first to reap the advantage, though she may be the first also to suffer temporary disadvantage and embarrassment. Certain it is that to-day the cream of medical students—those whom every institution is most anxious to have enrolled upon its list of matriculants—assemble in a medical school which only a few years ago was considered third-rate, but which has now suddenly leaped into the first position in the country, although located in a city which is signally deficient, as compared with New York and Philadelphia, in clinical and pathological material.

But a few days ago the president of the most justly famous university in the country spoke of the medical as a "profession which was once called learned."* Mortifying as it is, we must admit a certain amount of truth in it. Let Philadelphia, so long the acknowledged centre of American medical learning, not be laggard in making an effort to erase the blot upon our escutcheon. Suppose the number of graduates annually to be small: such a fact must add to, rather than detract from, the reputation of a first-class medical school, if the few who

* Annual Report of President Eliot, of Harvard University.

are graduated be thoroughly educated. And when, later, it shall be known that to be one of that annual few secures respect and insures success, there will be no uncertainty as to the future of the institution they fondly call Alma Mater.

CORRESPONDENCE.

THE CASE OF PROTRACTED GESTATION.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

IN your journal of January 15, 1872, I reported a case entitled "Protracted Gestation and Labor complicated with Puerperal Convulsions." At the end of the article a short editorial notice was added, in which a doubt was expressed whether the case was one of protracted pregnancy. I will simply give a short history of the case.

Mrs. K., as reported, was regular up to the 20th of November, 1870; in December, 1870, about the time she expected to be sick (which was near the holidays), she was expecting some company from New York. At this time she made the remark to her mother "that it was too bad, just as she was about to entertain her company, she was going to be sick, and that it would interrupt her pleasure." She prepared for the occasion. The time came, but with it no sickness. In a few days morning sickness set in. Her mother, thinking that her daughter had caught cold, put her on tansy tea, oil of tansy, mustard hip-baths, etc., for over a month. The only effect these had, was to make the patient extremely weak.

I do not doubt myself that the case was one of protracted gestation, and that impregnation took place soon after her last sickness in November, for shortly after she was taken with sick stomach in the morning, and partook of things which when in her usual health she did not care for. She first felt the movements of the child about the first days of March, which, counting from November, makes four full months.

On the 17th of September, 1871, the patient was taken with labor-pains, which lasted all night, gradually disappearing towards morning, after which she continued well (with the exception of the anasarca condition which set in on October 20) up to the time her labor set in, on October 30, three hundred and forty-four days.

The appearance of the child would also go to prove prolonged pregnancy. The child was enormous: its size and weight I have already given.

I would also state that the mother of the patient once carried a child (male), which was born dead after a protracted labor, two weeks over her time.

EUG. P. BERNARDY,
905 Walnut Street.

PHILADELPHIA, March 20, 1872.

ALARMING SYMPTOMS FROM INJECTION OF COLD WATER INTO THE VAGINA.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

IN your issue of 1st instant the case of Mrs. G., reported by Dr. A. K. Minich, with "symptoms of poisoning produced by the injection of a strong solution of sulphate of zinc into the vagina," reminds me forcibly of the following from my own practice.

Mrs. L., aged 36 years, suffering from chronic endometritis, had been using for some months cold-water injections morning and evening. There was prolapsus, and the cervical canal was quite patulous, admitting the extremity of the index-finger. The vaginal pipe of the syringe had in its extremity an opening which permitted a stream to escape directly forwards, as well as the lateral streams,—a faulty construction, I think, which I usually correct by closing up the terminal opening.

One evening during the past summer I was hastily summoned to her bedside, and found her presenting symptoms very similar to those described by Dr. Minich. I learned that she had used the syringe and cold water just before retiring for the night as usual, and that immediately afterwards she was seized with violent pain in the left iliac fossa, and was obliged to desist and to be lifted into bed.

I felt confident that the cold water had been thrown into the womb and a portion of it through the left Fallopian tube into the peritoneal sac. The faulty opening in the syringe-pipe was closed, and care enjoined that the pipe should not be passed into the os uteri. No similar accident has occurred since.

ROBERT BATTEY, M.D.

ROME, GA., March 14, 1872.

OBITUARY.

PROF. FREDERICK JÄGER.—This once distinguished ophthalmologist died recently at the age of eighty-eight, having outlived, it is said, his generation and his greatness; lying paralyzed and in comparative penury, a remnant of the past. He graduated at the University at Landshut in 1808, and also took his degree of M.D. at Vienna in 1818. Having soon afterwards made ophthalmology a special subject of study and practice, he was appointed to examine into the peculiar circumstances connected with the prevalence of ophthalmia in a portion of an important military command stationed on the Austrian frontier. He was next appointed Professor of Ophthalmology in the Josephinum Military Hospital, and here he gained reputation and honors which insured him an immensely remunerative private practice and the esteem and friendship of the educated and refined of his country, especially of Metternich, the prince and diplomatist. Vienna was the field of his professional exploits, and the scene of his many surgical triumphs in affections of the eye; but, his hand once paralyzed, and the labor thus passing to other surgeons, that great city soon forgot its favorite ophthalmologist, and he died in straitened circumstances, although his lavish expenditures had much to do with this result.

DR. GEORGE E. DAY.—This celebrated physician and medical writer died in England January 31, in his fifty-seventh year. He studied medicine at Edinburgh, taking quite a number of gold and silver medals and other prizes, and becoming the friend of men like Goodsir, Forbes, and others of that time. He was a martyr through many years to disease and to the results of a severe accident; yet he accomplished an amount of literary work that few of those endowed with perfect physical organization could attain. His knowledge was voluminous and his industry illimitable. His best-known works are "The Diseases of Advanced Life," "Chemistry in its Relation to Physiology and Medicine," a translation of Simon's "Animal Chemistry" and Rokitansky's "Pathological Anatomy" for the Sydenham Society, Lehmann's "Physiological Chemistry" for the Cavendish Society, and the greater portion of the medical articles embraced in Chambers' Encyclopædia. "Few who read the reviews and scientific notices in our own columns," says the *Medical Times and Gazette*, "could have surmised that they were written by an invalid disabled by ununited fracture of one arm, helpless

upon the legs, and distracted by a host of minor sufferings arising out of his state of rheumatism and prostration. Almost up to the last he retained his habit of literary work."

DR. HENRY D. BULKLEY.—The name of this gentleman, who died recently in New York at the age of sixty-seven, is better known to the profession at large as the translator and editor of Cazenave and Schédel on "Diseases of the Skin," than for those personal qualities which made him prominent and popular among his professional brethren in that city. During his whole career he made the study of cutaneous affections a specialty, on which he at one time lectured at the College of Physicians and Surgeons. He was at different times President of the County Medical Society of New York and of the Academy of Medicine, and editor of the *New York Medical Times*. He was a learned and skilful physician, honored for his integrity, and conspicuous for his zeal and industry in the pursuit of his profession.

PROF. C. A. LEE, M.D.—The subject of this notice, who died about the middle of February, in his seventy-third year, was well known as having held professorships in a number of the prominent medical schools of the country. Among these may be mentioned the Medical College of the University of New York, those of Buffalo, Geneva, and Woodstock, and the Bowdoin and Berkshire Medical Schools. But he was perhaps still more widely known for his contributions to medical literature. He edited the American edition of Dr. Copland's valuable "Dictionary of Medicine," was the author of a work on Physiology, and was at one time the editor of the *Journal of Medicine* of New York.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY, FEBRUARY 21, 1872.

THE PRESIDENT, DR. J. H. HUTCHINSON, in the chair.

DR. MÜLLER exhibited a specimen of *occlusion of the pericardium*. The heart was removed from W. M., æt. 64, a farmer, born in England, who was admitted to the Germantown Hospital on January 18, 1872.

All that could be ascertained of his previous history was that he had been injured while clearing land in Michigan, and that he had suffered much with shortness of breath, so that he was considered asthmatic. On admission he presented a strikingly blanched appearance; his tongue, gums, and teeth were dry, and covered with sordes. Breathing was stertorous, and so loud as to mask the heart-sounds. The pulse was 120, and extremely weak. There was dulness on percussion, and absence of respiratory sounds on the right side of the thorax. His urine was abundant, not albuminous, and voided for the most part involuntarily, as were also the feces three or four times a day. The comatose condition in which he was first seen, continued up to the time of his death, February 8.

Autopsy.—*Thorax*: The left lung was collapsed, firmly adherent; the pleural cavity contained about two pints of serum. The right lung was healthy. The heart was dilated. All the valves were more or less insufficient. The pericardial sac was completely occluded.

Abdomen.—The liver was very fatty. The kidneys were about normal in size, and showed on section some slight fatty degeneration. The spleen was enlarged to thrice the normal size, and filled with black blood. The stomach and intestines were healthy.

The brain was not examined.

DR. JOHN S. PARRY exhibited a specimen of *primary cancer of the vagina*, removed after death from a woman who was the mother of three children. She was in good health until July, 1871, when she applied to Dr. W. F. Jenks, at the Obstetrical Department of the Philadelphia Dispensary, on account of a profuse hemorrhage. He found a tumor between the vagina and rectum which was hard and ulcerated. A little later she was admitted to the Philadelphia Hospital, exhibiting

no cachexia whatever. Soon after admission, hemorrhage set in, and the induration spread from the posterior and lateral parts of the vagina to the rectum. By November, 1870, ulceration had progressed so far as to have destroyed the posterior part of the vagina and produced a communication between the vagina and the rectum.

At the autopsy all the organs in the pelvis were found more or less diseased. But a curious feature is that the uterus was scarcely at all involved. There was some ulceration posteriorly about the os, but the body of the organ was healthy. The left Fallopian tube was adherent, and the fimbriated extremity of the right Fallopian tube contained a little abscess.

There was no evidence of acute peritonitis in any part of the abdominal cavity. The bladder was perfectly healthy, except that it was somewhat congested. The ureters were normal, except that the right was somewhat smaller than the left; it traversed the indurated mass, but was patulous. There was no carcinomatous disease in any of the other organs.

DR. JAMES TYSON presented, for Dr. H. C. WOOD, the following specimens:

1. *Caries of the cervical vertebra* from a syphilitic patient;
2. *Softening of cerebrum and cerebellum*.

DR. TYSON also presented a specimen of *extensive atheromatous disease of the aorta*.

BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES.

MONDAY, FEBRUARY 5, 1872.

DIRECTOR W. S. W. RUSCHENBERGER, M.D., in the chair.

Present, twenty members.

DR. HENRY C. CHAPMAN made some interesting remarks upon the subject of Embryology, illustrating, by means of numerous colored drawings, the formation of the three blastodermic membranes which subsequently give origin to the integument, bones, etc., and also explaining the development of the eye and other special organs. This communication will probably appear in a future number of the *Philadelphia Medical Times*.

DR. J. H. MCQUILLEN directed attention to the deposition of tartar or salivary calculus, in large or small quantities, around the necks of the teeth, the accumulation being most extensive on the teeth in the immediate neighborhood of the salivary ducts. Writers had divided it into different varieties, —hard and soft, white, yellow, brown, and black. The differences, however, were simply due to whether it was a recent or an old deposit, and the absence or admixture of coloring-matter. The inorganic constituents were mainly phosphates and carbonate of lime and magnesia, combined with mucous, salivine, and animal matter. Of its origin—every article of food taken into the mouth, vegetable or animal, contains certain proportions of the salts of lime, magnesia, potassa, soda, etc.; and these can be found in the blood, being there mainly for nutrition of the bones and teeth. An illustration of this is made markedly manifest in the repair of bones and the rapidity with which the provisional callus is formed,—uniting the fractured ends of a long bone like the humerus or femur so that splints can be dispensed with in from six to eight weeks. In the ordinary nutrition of the bones and teeth the excess of these salts present in the blood is removed from the system through the various secretions. Occasionally, owing to their becoming insoluble, they are arrested in their passage through the different channels, and accumulations take place at certain points; thus, biliary calculi are found in the gall-bladder and the ducts connected with it, urinary calculi in the kidneys and bladder, chalk-stones form in the joints, and calcareous accumulations occur in the brain.

A large proportion of the salts passes through the salivary glands, and is deposited around the teeth. It is fair to infer, therefore, that salivary calculus originates from this source. It has, however, been suggested by some that, like the coral islands and chalk cliffs, it has its origin in infusoria. Recently, on making some examination of the salivary calculus and decay removed from teeth, Dr. McQ. had been interested

in the movements of a number of microscopical objects. In consulting the various works in his possession, he had been somewhat surprised to find that no reference was made to this matter either in the *Micrographic Dictionary*, Quekett, Carpenter, Hogg, or Gosse. The only exception to this was a paper by Schrott, of Mülhhausen, Germany, translated by Dr. Adolf Petermann in the *Dental Cosmos*, vols. x. and xi., in which he describes a variety of vegetable and animal parasites observed by him in the saliva. Dr. J. G. Richardson, in his "Hand-book of Medical Microscopy," also touches upon the subject. In his own observations he had invariably found, on placing recently-deposited tartar under the microscope, myriads of objects moving about in the saliva in the most rapid manner; these were of various forms bearing resemblance to the amœbæ, monads, vibrones, and spirilla, the latter being the least numerous. In certain portions of the field, where there were small patches of tartar, those that resemble the vibrones could be found entangled and projecting from them, and writhing as if they were endeavoring to escape from their position. In other patches, from which they had escaped, there was a honeycombed appearance somewhat like that found in brain-coral. He was by no means disposed to assume that the presence of these beings in the calculus was due to the fact that they were engaged in its formation, as they might have become imbedded in it.

In the decay removed from the teeth he had found a number of the so-called denticolæ; these in their appearance resembled the vibrones already referred to. The decay of teeth had been attributed by some to the presence and action of these beings; and while he was not prepared to deny that this was the case, as his opportunity for investigation had not been sufficiently extended to warrant him to express an opinion, it was reasonable to infer that they may have worked their way in after the teeth had become decayed.

REVIEWS AND BOOK NOTICES.

PULMONARY CONSUMPTION: Its Nature, Varieties, and Treatment; with an Analysis of One Thousand Cases to exemplify its Duration. By C. J. B. WILLIAMS, M.D., F.R.S., Senior Consulting Physician to the Hospital for Consumption, Brompton, and CHARLES THEODORE WILLIAMS, M.A., M.D., Oxon., Physician to the Hospital for Consumption, Brompton. 8vo, pp. 315. Philadelphia, Henry C. Lea, 1872.

ON THE TREATMENT OF PULMONARY CONSUMPTION BY HYGIENE, CLIMATE, AND MEDICINE, IN ITS CONNEXION WITH MODERN DOCTRINES. By JAMES HENRY BENNET, M.D., M.R.C.P., etc. Second Edition, 8vo, pp. 190. D. Appleton & Co., 1872.

As its title implies, Dr. Williams' work is a much more comprehensive treatise on the subject of consumption than that of Dr. Bennet. Its writer has evidently had, moreover, better opportunities for observing the disease under its various manifestations, for, in addition to having been a most successful practitioner of medicine in London, he has held several hospital positions, and has evidently used them for the purpose of acquiring a thorough acquaintance with the nature, course, and treatment of phthisis pulmonalis. Although he had in early life the benefit of instruction from Laennec, both at the bedside and in the dead-house, he did not adopt the very exclusive views of the great master, but ranged himself, with Andral, Alison, and Cruveilhier, on the side of those who maintained that phthisis occasionally was the result of inflammation. This opinion he has expressed in some of his earlier writings. In the preface to the book before us he says, "I believe pulmonary consumption to arise from a decline or deficiency of vitality in the natural *bioplasm* or germinal matter, and this deficiency manifests its effects not only in a general wasting or atrophy of the whole body, but also in a peculiar degradation—chiefly in the lungs and lymphatic system—of portions of this bioplasm into a sluggish, low-lived, yet proliferating matter, which, instead of maintaining the nutrition and integrity of the tissues (which is the natural office of the bioplasm), clogs them and irritates them with a

substance which is more or less prone to decay, and eventually involves them also in its own disintegration and destruction. This degraded bioplasm, which I will call phthino-plasm (wasting or decaying forming material), may be thrown out locally, as a result of inflammation, or it may arise more spontaneously in divers points of the bioplasm in its ordinary receptacles, the lymphatic glandular system; and then it commonly appears in the form of miliary tubercles, scattered through the adenoid tissue of the lungs."

In regard to this adenoid tissue, Dr. Williams says that there are in various parts of the body structures exactly resembling—in fact, identical with—that of the follicles of the lymphatic glands, and he believes that the tubercle-nodules which are found in the lungs in cases of miliary tuberculosis are really overgrowths of nodules which existed before. It is well known that Niemeyer and other German pathologists regard the form of disease originating in inflammation, and which they call phthisis pulmonalis, as by no means identical with tuberculosis, although the former frequently becomes complicated by the latter, and undoubtedly predisposes to it, but it has not yet been made very clear in what way. By Niemeyer it has been attributed to the direct infection of the blood in consequence of the absorption of the corpuscular elements of the caseous matter which characterizes phthisis, and which is supposed to give rise to extravasation of white blood-corpuscles in various parts of the lungs. Dr. Williams explains the supervention of tuberculosis by supposing that the presence of pus in any part, whether by production or inoculation, may have a deteriorating influence on the sarcophytes (leucocytes) of the blood and lymphatics, which may in their turn excite to hypertrophy the adenoid tissue which is found in various parts of the lungs, and in this way give rise to miliary tubercles.

The statistical parts of the work have been entirely confided to the author's son, Dr. C. Theodore Williams, and the chapters contributed by this gentleman "On Family Predisposition and certain other Causes of Consumption," "Hæmoptysis and the Hemorrhagic Variety of Consumption," "The Duration of Pulmonary Consumption," and on the treatment of consumption, will be found to contain much useful information. We regret that want of space prevents us from presenting our readers with an analysis of them.

In conclusion, we would say that the book is fully up to the times, and not merely contains a digest of the experience of an accomplished physician who has attained an advanced age in the practice of his profession, but shows that the author has a fair acquaintance with the writings of his continental contemporaries.

We cannot speak of the second book in terms of such unqualified praise. Dr. Bennet has, in one sense, certainly enjoyed unusual opportunities for the study of phthisis, for some years ago he was obliged to give up a lucrative practice in London to go to the south of France, in the hope that a change of climate would arrest the development of the disease in his own person. His treatment of his own case seems to have been judicious, and many of the rules which he lays down for the management of consumptive patients are excellent. His field of observation has, however, been limited by his change of residence, and his practice has been confined to the care of invalids who have, like himself, left their homes in search of health.

He regards all forms of phthisis as essentially the same disease, and dependent upon "a tubercular exudation in varied stages of development, from the gray or yellow miliary tubercle to the large cheesy or cretaceous masses," and says, in his preface, "I believe, also, that I am warranted in stating that most physicians of matured age and enlarged experience, who have given themselves the trouble to study this controversy, lean to the same side, and are indisposed to substitute the term 'chronic pneumonia' for that of 'chronic phthisis,' on the ground of long-continued clinical observation. On the other hand, most of the followers of the new 'inflammation doctrines' are young, enthusiastic physicians, full of knowledge, but deficient in experience." It would, of course, be interesting to know at what age enthusiasm ceases to exist and the powers of observation become keen. We certainly know of some physicians of mature age and of great clinical experience who are adherents of the new "inflammation doc-

trine," as Dr. Bennet calls it, although he cannot be ignorant of the fact that it is really not new, since it was professed long ago by the eminent physicians to whom we have already alluded in the course of this notice. It is therefore scarcely fair to say, as he does, that all those who are best qualified to have an opinion on this point are of his way of thinking. Nor do we think that the acceptance of the inflammation doctrines necessarily implies a change of the plan of treatment at present in vogue. Every author with whose works we are familiar recognizes that there is a constitutional condition behind the local one calling for supporting measures. Even Niemeyer's treatment can scarcely be called depleting, and the advice which he gives to keep the patient quiet when there are evidences of much pulmonary irritation might, we think, be followed with advantage by others. Dr. Bennet's treatment of his own case could with as much propriety be called antiphlogistic. Unless we misunderstand what he has written, he believes that the acceptance of the theory which he condemns brings about different results in the physician and the patient, the former becoming excessively anxious to protect his patient from all sources of irritation, the latter extremely reckless in exposing himself to them.

The chapters on the treatment of consumption by hygiene, climate, and medicine contain the suggestions of a physician who has made the climate of the shores of the Mediterranean a careful study; and the last chapter in the book, entitled "What are Cured Consumptives to do in Life? Can they Marry?" will be found well worthy of an attentive perusal.

MODERN MEDICAL THERAPEUTICS; a Compendium of Recent Formulæ and Specific Therapeutical Directions. By GEORGE H. NAPHEYS, A.M., M.D., etc. Third Edition. 8vo, pp. 496. Philadelphia, S. W. Butler, M.D., 1871.

This volume, as its title-page expresses, consists of a large number of prescriptions, accompanied with directions, both as regards the use of the remedies and the diet and general hygienic treatment of the patient.

The author has drawn largely from Aitken's Science and Practice of Medicine, and many other works of similar character, and also from the *Lancet* clinical reports, the English Hospital Reports, etc.

Thus we see that all that is in the book is valuable. But the work labors under the same difficulties which embarrass the various school compendiums: it is necessarily brief, and its conciseness deprives it of value.

A foot-note refers the reader to the source of each extract, and thus this work accomplishes the object of an Index Rerum on therapeutics. If the course on materia medica and therapeutics in our medical colleges were a practical one, if every student performed for six months the duties of a pharmacist, there would be no demand for such a work. Under the present system of medical education, the time given to the study of diagnosis is insufficient, but that devoted to the acquisition of an acquaintance, theoretical and practical, with the articles of the materia medica, the physician's tools, is entirely inadequate. The young physician makes out his case, but how shall he treat it? He generally treads in the footsteps of his preceptor, slightly modified by the modern teachings of his medical school.

The want of a knowledge of practical therapeutics is general even among the most laborious and best-educated members of our profession.

This want is supplied by study after graduation, by reference to our standard works on therapeutics, and by constant reference to the results of the labors of other minds as expressed in the various journals. But to the hard-worked country practitioner time is precious, journals are few, and money for books is not too plenty. Dr. Napheys presents to him a tempting volume, a cheap compendium which claims to contain just the knowledge of which he has felt the need, positive directions for treatment, sharply-drawn lines, no doubts, no hesitating.

That the want has been felt, and that this book has supplied the need, is evidenced by the simple fact that two large editions have been exhausted in little over a year. The book is undoubtedly good and useful; but its usefulness would be greatly enhanced by an increase in its size.

We cannot close this notice without calling attention to,

and expressing our disapproval of, the manner of writing the directions appended to the prescriptions. Great care has been given to the terminations of the names of the medicines, but the same care has not been taken in writing the directions. A few examples will show to what we refer. Prescription No. 88 (pills), "Three to be taken *ter die*." Prescription No. 90, "A dessertspoonful in water *ter die*." Prescription No. 91 (pills), "Two *ter die*." Prescription No. 94, after giving medicines and excipients, ends with, "Divide into XL pills." Again, we find many prescriptions ending in this manner: "For ten pills," "For six powders," etc. These things may seem trifling, but they are incorrect and inelegant. We are all prone enough to become careless in little things, and our guideposts should set us good examples, and, to use an old and true proverb, "if a thing is worth doing, it is worth doing well."

TRANSACTIONS OF THE NEW HAMPSHIRE MEDICAL SOCIETY (Eighty-First Anniversary), held at Concord, June 6 and 7, 1871. 8vo, pp. 110. Manchester, John B. Clarke, printer.

The annual address was delivered by the President, W. H. H. Mason, M.D., who dwelt at length on the necessity of deep research in making a diagnosis, and of assisting our senses by the microscope, by chemistry, etc. He attaches great importance to the changes in the character of the urine consequent on disease, and illustrates by various cases the value of medical chemistry in detecting obscure diseases.

Dr. John Blackmer delivered the annual oration on the subject, "Our Duties with Regard to the Use of Alcohol," under which head he includes brandy, whiskey, wine, ale, cider, and beer. Much time and research have been bestowed on the preparation of his address. Dr. B. can see no benefit from the use of alcohol in any class of diseases; while he sets forth in strong colors the evil consequences that too frequently follow the loosely-given advice of the physician to "take a little wine."

The report on surgery, by George A. Crosby, M.D., of Manchester, is a paper of more value than the majority of its class. He calls attention, in the course of his remarks, to the "autoplastic treatment of severe burns," the character and treatment of carbuncles, the uses of carbolic acid, the operation of "tapping the urinary bladder," and fractured ribs of the insane, and closes with an account of some of the many curious results following injuries of nerves. Each article is concise and clearly written.

Next follows a paper by Henry M. Field, M.D., on "Relief of the Indigestions by the Use of Physiological Remedies." The remedies alluded to are, of course, pepsin, pancreatin, hydrochloric acid, iron, with tonics, and water enemata.

Dr. G. B. Conn, of Concord, reports a case of "Pneumopericardium." Death occurred after ten or twelve hours' illness. The history of the case reveals but little from which to form a diagnosis. Age of the patient, 41 years; height, 5 feet 8½ inches; weight, 180 pounds. Habits intemperate. He was confined in a prison at the time of his death. Six weeks previous to this event, he was seized with a pain in his chest which was "like cramp;" another similar seizure occurred a few days later. Soon after these seizures became more frequent. During the attacks his surface was cold and pulse weak and fluttering. The man was taken from work, counter-irritants were applied externally, with antispasmodic medicines internally, and he was placed upon a light diet. An apparent change for the better followed; but death resulted from exhaustion, after an uneasy night. This exhaustion was the consequence of congestion of the lungs, with pulse 130, respiration 25 per minute, mucous râles, and frothy expectoration tinged with blood. A post-mortem examination revealed a congested lung without inflammatory signs. The pericardium was distended with air, which escaped with a hissing sound when a puncture was made. There were no signs of inflammation either recent or previous about the pericardium, endocardium, or valves. The article closes with extracts from the various treatises on Pathological Anatomy.

Dr. Wheeler, of Dover, contributes an interesting paper on the almshouses of the State.

Reports of delegates to the Rhode Island Medical Society and the American Medical Association, and obituary notices of John G. Parker, M.D., James B. Abbott, M.D., and William Loughton, M.D., are appended to the volume.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA AT ITS TWENTY-SECOND ANNUAL SESSION, held at Williamsport, June, 1871. Sixth Series, Part Second. 8vo, pp. 280. Published by the Society.

The delegates were welcomed by Dr. Samuel Pollock, of Lycoming, in an eloquent address. The sittings of the society occupied portions of three days, and were relieved by a banquet, receptions, an excursion to Minnequa Springs, etc.

The address of the President, S. D. Gross, M.D., LL.D., of Philadelphia, was very interesting. It was delivered in the evening at the Academy of Music. The audience embraced many of the refined and cultivated citizens of Williamsport. The subject of the address was *physicians, their qualifications, failings, etc.*, and was well illustrated by anecdotes.

A statement, by Dr. A. H. Halberstaat, of his difficulty with the Schuylkill County Medical Society was received by the State Society and included in the transactions.

Dr. Laurence Turnbull read a report of *six hundred cases of disease of the ear*.

Dr. Benjamin Lee, of Philadelphia, read the history of a case of *thyroid dislocation of the hip-joint in the second stage of coxalgia*. It was reduced by manipulation.

The same gentleman exhibited a peculiar modification of Taylor's "spinal splint" for the relief of posterior curvature of the spine. The principle on which this instrument is constructed is to discard the crutch-head supports in the axillae, and to substitute for it pressure by means of padded plates, at and a little below the point of disease, thus preventing the opposition of the diseased surfaces.

Dr. T. H. Squire, of Elmira, exhibited his vertebrated prostatic catheter.

The reports of the county medical societies form a series of valuable papers, embracing notes on drainage, topography, geology, meteorology, mortuary tables, and prevalent diseases throughout the entire State for the past twelvemonth. From these we learn that epidemics of scarlatina ranged through large portions of the State.

The report from Philadelphia embraces an account of the epidemic of relapsing fever which occurred in that city, and also a complete record of the cases of yellow fever, imported and consequent, with maps and a succinct history of each case.

The death-rate of Philadelphia for the year 1870 was 2.27 per cent., which places it among the healthiest of cities. The total number of deaths was 15,317; of these 2308 were from phthisis pulmonalis. The death-rate for the year 1869 was 2.23 per cent. The death-rate for London for 1870 was 2.40 per cent., Edinburgh 2.60 per cent., New York 2.93 per cent., Liverpool 3.10 per cent.

BOOKS AND PAMPHLETS RECEIVED.

On the Physiology of Syphilitic Infection. By Fessenden N. Otis, M.D., Clinical Professor of Venereal Diseases at the College of Physicians and Surgeons, New York, etc. Reprinted from *The Medical Gazette*.

Clinical Observations on the Dementia and the Hemiplegia of Syphilis. By M. H. Henry, M.D., Surgeon to the New York Dispensary, Department of Venereal and Skin Diseases. Reprinted from *The American Journal of Syphilography and Dermatology*.

Third Annual Report of the State Board of Health of Massachusetts, Boston, 1872.

Practical Suggestions in Naval Hygiene. By Albert Leary Gihon, A.M., M.D., Surgeon United States Navy, etc. 12mo, pp. 131. Washington, Government Printing-Office, 1871.

GLEANINGS FROM OUR EXCHANGES.

THE DISTILLED WATER OF THE SEEDS OF THE LUCUMA MAMMOSA.—Dr. John C. Oxamendi (*Anales de la Real Academia de las Ciencias médicas, físicas y naturales de la Habana*), in the course of a communication to the Royal Academy of Medicine of Havana, calls attention to this preparation. He

says, "The almond enclosed in the fruit of the *Lucuma mammosa* (natural order Sapotaceæ), a tree well known in Cuba, where its fruit is extensively eaten, should have occupied long ago, in consequence of its medicinal properties, a prominent place in our indigenous materia medica, and might have been used with great advantage as a substitute for the distilled waters, which owe their medicinal qualities to the cyanide of potassium, and rarely to the prussic acid they contain." In consequence of the cherry-laurel water obtained from the United States being of poor quality, Dr. Oxamendi says the distilled water of bitter almonds, and, where this cannot be obtained, that of the *Lucuma mammosa*, should be preferred. The seeds of this plant are encased in a thick coating, which renders it possible to keep them for a long time without the occurrence of putrefactive change.

A bottle containing a small quantity of the distilled water was shown to the members of the Academy, and found to have the smell of hydrocyanic acid.

In regard to the therapeutical application of this remedy, Dr. Oxamendi says that it should be administered in those affections in which we wish to diminish an exaggerated pathological sensibility, manifested, directly or indirectly, by reflex action. Hence it has been recommended in cardialgia and vomiting. It is also used to allay coughing, but should not be prescribed in cases accompanied by fever or by profuse expectoration.

Little has been written in regard to the medical properties of this fruit. Descourtiz writes concerning it as follows: The fruit before ripening possesses astringent qualities which make it useful in the treatment of cases of intestinal atony, and chronic diarrhoeas which have resisted other remedies are sometimes cured by it. The ripe fruit is slightly astringent, and will be found a useful addition to gargles in sore throat. The seeds are said to possess diuretic properties.

THE BATH IN SMALLPOX.—Dr. Stokes, Regius Professor of Physic in the University of Dublin, recommends in the *Dublin Journal of Medical Sciences* for January, 1872, the use of the warm bath in the treatment of smallpox. He says, "We cannot doubt that the mortality in smallpox hospitals would be greatly diminished by the use of the bath." After describing a very severe case of confluent smallpox in which the patient was kept alive only by stimulants, he says the trial of the warm bath was suggested to him by Mr. Smyly. "The effect was instantaneous and marvellous. The delirium ceased as if by magic. It was the delirium of pain; and the patient exclaimed, 'Thank God! thank God! I am in heaven! I am in heaven! Why didn't you do this before?' The fœtor immediately and completely disappeared, so that, on entering the ward, no one could suppose that there was a case of smallpox in it. He was kept at least seven hours in the bath." This case and its singular result, in addition to the experience of Hebra, justify the recommendation of the use of the bath.

MODIFICATION OF THE ORDINARY TEST FOR THE BILIARY ACIDS.—M. Strassburg, of Bremen, suggests (*The Practitioner*, February, 1872; from *Pflüger's Archiv für gesammte Physiologie*, Heft. x. and xi., 171) a modification of Pettenkofer's test for the presence of biliary acids in urine, which promises to be serviceable clinically, and, according to his statements, is of extreme delicacy, enabling a trace not exceeding $\frac{1}{100000}$ ths to be readily detected. He dips a slip of filtering-paper into the urine suspected to contain the biliary acids, and to which a little cane-sugar has been previously added. The slip is withdrawn and dried; a drop or two of pure concentrated sulphuric acid is now applied to it by means of a glass rod. On holding the paper up to a strong light, a beautiful violet color makes its appearance.

PRECOCIOUS DEVELOPMENT.—Flügel describes (*British Medical Journal*, February 24; from the *Bayr. Aertl. Intell.-Blatt*, No. 49, 1871) the case of a female child who died of diarrhoea at the age of five and a half years. She was five feet in height. The incisor teeth had all appeared when she was six months old, and at nine months she had all the molars. At a year and a half old she menstruated, and, especially in her later years, the periods were tolerably regular. The external genital organs were well developed, without hair; the breasts were full, and the pelvis roomy. The condition of the internal genitalia was not ascertained. As regarded her intel-

lect, she did not appear to be in advance of other children of her age, although she had begun to speak when six months old.

QUINIA AND DIGITALIS IN HEMICRANIA.—M. Debout (*The Practitioner*, February, 1872; from the *Journal de Médecine*) has obtained favorable results from the combination of quinia with digitalis in the treatment of migraine. The formula he employs is, sulphate of quinia, forty-six grains; powdered digitalis, twenty-two grains; of syrup, q.s., to be made into thirty pills, of which one is to be taken every evening. M. Gauchet states that he also has had frequent opportunities of treating hemicrania in this manner. In old-standing cases it is occasionally ineffectual. He obtained the best results in those cases where the attacks occurred at the menstrual periods.

IMPALEMENT OF ABDOMEN AND THORAX, WITH DISSECTION TWENTY YEARS SUBSEQUENTLY.—About eighteen years ago, Dr. Joseph Sargent, of Worcester, reported to the Boston Society for Medical Improvement (*The Boston Medical and Surgical Journal*, February 22) the case of a woman who, in sliding down hay from a loft, was impaled on the handle of a pitchfork, which entered the body through the vagina to a distance of twenty-two inches, where it was arrested by the upper left rib, which it apparently broke, and by the woman's feet reaching the floor. The woman recovered, and lived for twenty years after the accident. At the autopsy, the cavity of the left chest was found to be completely filled with the proper contents of the abdomen. These were afterwards ascertained to be the stomach, the transverse colon with a few inches of the descending colon, and a considerable portion of the small intestines. All these had passed through an opening in the diaphragm to the left of the median line. The callus of fracture of the first rib on the left side was quite conspicuous. The left lung was compressed to the thickness of the hand. It had also contracted adhesions with the stomach. The heart was crowded to the right of the sternum. On removing the contents of the abdomen, a large, irregular cicatrix was quite obvious in the peritoneum of the left recto-uterine cul de sac. None of the viscera appeared to have been injured.

PROLONGED EXPIRATION.—Dr. Samuel G. Armor (*New York Medical Journal*, March, 1872), in the course of an article on the Physical Cause of Prolonged Expiration and its Relation to Consumption, says that it frequently occurs in the pretubercular stage of phthisis. It may have its origin in an error of nutrition entirely independent of tubercular, bronchial, or emphysematous complications. This error may be general or local. In the first case, the contractile power of the muscular and elastic fibres of the lungs participates in the universal failure of nutrition. Hence the existence of the sign during and after exhausting diseases. In the second case, the natural resiliency of the lung-tissue may be simply the result of a local condition, in which no tubercles have been deposited or no degeneration of the lungs has taken place,—a condition which may be expressed by the term "weak lungs."

ALTERATIONS IN THE NON-STRIATED MUSCULAR FIBRES OF THE SKIN.—The changes of the smooth muscular fibres in certain diseases of the skin have been studied by Neumann, Derby, Rossbochtz, and Köbner (*New York Medical Record*, February 1, 1872; from *Allgem. Wiener Med. Zeitung*). In variola, tumefaction of these fibres may be met with in examinations on the level of the pustules. This form of hypertrophy differs from that met in lichen, ichthyosis, elephantiasis, prurigo, and sclerema in adults, as has been demonstrated by the above gentlemen. In these latter cases it is not easy to determine if the hypertrophy is simple or multiple; in fact, the fibres, like the nuclei, are hypertrophied, and the muscular fascia becomes more voluminous throughout. This augmentation of volume is, without doubt, consecutive. Derby thinks it is due to exaggerated contractions of the non-striated muscular fibres, whose function it is to express the secretions from the sebaceous follicles. In specimens which are quite contracted, these changes seem to involve the whole thickness of the muscular layer, there appearing to be in some cases a new formation of these elements.

The organic muscles sometimes undergo atrophy. This

also takes place in both fibre-cells and nuclei, a fine granular matter being deposited, which, with the cell-contents being later absorbed, leaves the fibres and nuclei collapsed. This latter process is characteristic of senile atrophy of the skin.

INNervation OF THE HEART AND BLOOD-VESSELS.—Prof. Wm. Rutherford, in his admirable lecture on Experimental Physiology in the *Lancet* for December 16, 1871, and January 20, 1872, shows that within the heart there is a reflex nerve mechanism, consisting of cells connected with intra-cardiac and extra-cardiac nerves; the former being cardio-motor and excitocardio-motor, the latter cardio-inhibitory. The extra-cardiac nerves are branches of the vagus and sympathetic, and both are connected with the medulla oblongata. Both nerves transmit their influence to the heart, the sympathetic accelerating the cardiac action, the vagus inhibiting or retarding it, and, if powerfully stimulated, even for a time completely arresting the cardiac contractions, the heart during the rest being dilated. The branch of the vagus which does this is, in rabbits, the inferior cardiac.

The superior cardiac branch of the vagus is the sensory nerve of the heart, and is also an inhibitory nerve, but inhibitory for the blood-vessels; that is, when it acts it brings the contractile elements in the blood-vessels into a state of rest, thereby causing dilatation. Thus, while the inferior cardiac branch of the vagus is cardio-inhibitory, the superior cardiac is vaso-inhibitory. The former transmits its influence from the medulla oblongata to the cardiac ganglia; the latter transmits its influence from some portion of the heart to the medulla.

The vaso-motor nerves are immediately derived from the sympathetic; but Ludwig and Thery have shown that the nerve-cells presiding over them are not contained in the sympathetic ganglia, but in the medulla oblongata, which is therefore the seat of the general vaso-motor centre: general, for possibly there are special vaso-motor centres in the submaxillary ganglion and in the ganglia found in the penis. The vaso-motor nerves leave the spinal cord in the anterior roots of the spinal nerves, whence they either pass through, or receive branches from, the ganglia upon the sympathetic, and proceed to the blood-vessels. The general vaso-motor centre in the medulla oblongata appears to be in almost constant action, thereby keeping up some degree of contraction in the blood-vessels. But its action may also be diminished, the effect of which is diminished contraction or complete relaxation of the vessel. The vaso-motor nerve being for the time paralyzed, the walls of the vessel relax, and the blood-pressure and elasticity open up the vessels. The nerves which do this Dr. Rutherford calls vaso-inhibitory nerves, corresponding to the cardio-inhibitory. The most remarkable vaso-inhibitory nerve we know is that already alluded to as such,—the superior cardiac branch of the vagus in the rabbit. If we divide this nerve and stimulate its central end, we cause a remarkable lowering of the blood-pressure, owing chiefly to dilatation of vessels in the abdominal viscera and lungs (Ludwig and Cyon). The inhibiting influence seems to be conveyed to the medulla. There are two instances in which vascular dilatation follows stimulation of the peripheral end of a nerve,—viz., the chorda tympani, and the nervi erigentes of the penis.

The application of these facts is made to nutrition in accounting for the vascular dilatation in active nutritive changes, which are accounted for by Prof. Rutherford by the action of these vaso-inhibitory nerves, instead of to a more powerful *vis a fronte*. Loven approximates the same idea when he shows that the blood-vessels of a part may be dilated by artificial stimulation of its different nerves, as in inflammation or irritation; but he restricted it to such phenomena as those of blisters, and did not extend it to nutrition.

ON THE USE OF LACTO-PHOSPHATE OF LIME.—Dr. R. Blacke calls attention, in *The Practitioner* for February, 1872, to the use of this salt in adynamic fevers and in convalescence. The want of success which has generally attended the employment of the phosphates he attributes to the fact that they are given in such quantities that there is not enough lactic acid in the gastric juice to dissolve them. He therefore recommends the administration of lacto-phosphate of lime, which he says is at once an aliment and an article of food, and a medicament of the highest value. It is, moreover, soluble in the secretions of the stomach, and is readily absorbable.

MISCELLANY.

THE ANNUAL COMMENCEMENTS.—The Jefferson Medical College held its annual commencement at the American Academy of Music, in this city, on Saturday, March 9. The degree of Doctor of Medicine was conferred upon 115 graduates. The valedictory address was delivered by Joseph Pancoast, M.D., Professor of Anatomy.

The annual commencement of the Medical Department of the University of Pennsylvania was held at the same place on Tuesday, March 12, when 83 gentlemen received the diploma of the Institution. D. Hayes Agnew, M.D., Professor of Surgery, made the valedictory address. The Dean of the Faculty, Dr. Rogers, announced that the thesis of Thomas Hunter, of Pennsylvania, "On Correspondence of Convolutions of the Brain with Markings on Interior of Cranium," and that of William T. Rogers, of Georgia, "On Hemorrhagic Malarial Fever," had been commended for their excellence, and that the Society of the Alumni had voted each of these gentlemen a present of fifty dollars.

The number of graduates at the College of Physicians and Surgeons, New York, at the Bellevue Hospital Medical College, New York, and at the Medical Department of the University of New York, are respectively 78, 129, and 75; in all, 282.

Thirteen women graduated at the Women's Medical College of this city, and only eight at the corresponding institution of New York,—so small a number that we are tempted to believe that the medical instruction of women, notwithstanding the notoriety that the supporters of the movement have succeeded in giving to it, and the special privileges that have been obtained for female students at the Pennsylvania Hospital, is not likely to be a success.

CHARTERS REVOKED.—Our readers will be glad to hear that the charters of the Philadelphia University of Medicine and Surgery, and of the American University of Medicine, were revoked on the 20th of March by a unanimous vote of both branches of the Legislature of this State. The testimony in reference to the sale of diplomas by these institutions, elicited by the committee of the Senate, was of such a convincing character that the Legislature could with honor to itself have taken no other course.

While we rejoice that Messrs. Paine and Buchanan, and the bogus colleges of which they were the presiding spirits of evil, are thus prevented from the perpetration of any further frauds, we cannot help regretting that no punishment is likely to be inflicted upon men who have abused the privileges which have been conferred upon them and brought disgrace upon the community in which they live. They are certainly also morally, if not legally, guilty of obtaining money under false pretences; for it was clearly shown that their scholarships were bought by young men who supposed that they were thus enabling themselves to attend the lectures delivered at the University of Pennsylvania.

The secular press of this city deserves the thanks of the medical profession for the pains it has taken to expose the evil and to force our legislators to take cognizance of it. We hope our contemporaries have learned from the investigation that all the so-called prejudices of regular physicians are not entirely without foundation, and that men who have emancipated themselves from the restraint of rules to which the honorable members of their profession cheerfully submit, are

not likely to be over-scrupulous in their conduct in matters concerning which the public is better able to judge of its propriety.

JOURNALISTIC CHANGES.—A new journal, to be called *The Washington Medical Monthly*, is announced. It is to be edited by Drs. S. C. Busey and William Lee, who, it will be remembered, recently dissolved their connection with the *National Medical Journal*, in consequence of the publishers insisting upon the insertion of an article of which they disapproved. The publishers seem to have had the interests of their advertisers more at heart than the advancement of medical science, and no other course than that of retiring was left to the editors. They have our most cordial wishes for the success of their new enterprise.

Messrs. Judd & Detweiler, the publishers of the *National Medical Journal*, announce that "its publication is temporarily suspended until arrangements can be consummated with some competent and responsible party to conduct its editorial department in a creditable manner." We think it, however, very unlikely that such a person will be found willing to undertake the editorial duties of a journal the publishers of which have shown so little respect for the rights of editors.

We have not received the last number of the *Medical World*, but learn from *The Medical Record* that it has also lost its editor. The cause of his retirement is not stated; the only information vouchsafed to us by the publishers is that "Dr. Reuben A. Vance, whose name lately appeared as editor, is no longer connected with the *Medical World*."

APPOINTMENTS OF SURGEONS TO THE WILLS OPHTHALMIC HOSPITAL.—At a meeting of the members of the Board of City Trusts, held March 25, Drs. Morton, Harlan, Dyer, Goodman, McClure, Keyser, Thomson, and Norris were duly elected Attending Surgeons to Wills Hospital. These gentlemen will enter upon their duties to-day.

DR. JAMES MARKOE has been elected Attending Physician to the Presbyterian Hospital, *vice* Dr. John F. Meigs, who declined the appointment. Dr. George S. Gerhard has been appointed pathologist to the same hospital.

A NEW JOURNAL.—We have received the second number of *The Western Lancet*, a new monthly medical journal, edited by Drs. Eustace Trenor and Heman P. Babcock, and published under the auspices of an association of physicians at San Francisco. Among its leading features, the prospectus states that "at least one photograph from nature of a pathological specimen or surgical case will accompany each number." The journal promises to be a good one.

THE FINITE AND THE INFINITE.—A lady has written to the Academy of Sciences in London that she has at last found the principle which differentiates the finite from the infinite. She demands that five other Academies shall join the Academy of Sciences, and that together they shall pay her the sum of one million pounds sterling. At this price she will yield up her secret.

ROYAL VICTIMS TO SMALLPOX.—Dr. John Gardner (*New York Medical Journal*; from the *Edinburgh Medical Journal*) has collected the following history of the ravages of smallpox in some of the royal houses of Europe, hoping thus to impress the public mind more forcibly as to the advantages of vaccination:

Among the family of Charles I. of Great Britain, of his

forty-two lineal descendants up to the date of 1712, five were killed outright by smallpox: viz., his son Henry, Duke of Gloucester; and his daughter Mary, wife of the Prince of Orange, and mother of William III.; and three of the children of James II.: viz., Charles, Duke of Cambridge, in 1677; Mary, Queen of England, and wife of William III., in 1694; and the Princess Maria Louisa, in April, 1712. This does not include, of course, severe attacks, not fatal, such as those from which Queen Anne and William III. suffered. Of the immediate descendants of his contemporary, Louis XIV. of France (who himself survived a severe attack of smallpox), five also died of it in the interval between 1711 and 1774: viz., his son Louis, the Dauphin of France, in April of 1711; Louis, Duke of Burgundy, son of the preceding, and also Dauphin, and the Dauphiness, his wife, in 1712; their son, the Duc de Bretagne, and Louis XV., the great-grandson of Louis XIV. Among other royal deaths from smallpox in the same period were those of Joseph I., Emperor of Germany, in 1711; Peter II., Emperor of Russia, in 1730; Henry, Prince of Prussia, in 1767; Maximilian Joseph, Elector of Bavaria, Dec. 30, 1777.

THE REPORT OF THE SUPERVISING SURGEON, UNITED STATES MARINE HOSPITAL SERVICE.—We make the following extract from this report:

Statement of the operations of the Marine Hospital Service for the six months ending December 31, 1871, as compared with the six months ending December 31, 1870.

SUMMARY.

	1870.	1871.	Differ- ence.
Number of patients treated in hospital.....	8,151	7,257	
Number of days of hospital relief...	224,023	199,854	
Average number of patients maintained daily.....	1,231	1,098	
Percentage of deaths.....	3½ per ct.	3 per cent.	
Expenditures incurred for care and treatment of sick and disabled seamen.....	\$235,159 05	\$195,109 04	
Cost per diem for each patient.....	\$1 05	\$0 97.6	
Diminished expenditures during the six months ending December 31, 1871.....			\$40,050 01
Diminished percentage of expenditures during the six months ending Dec. 31, 1871, compared with the six months ending Dec. 31, 1870.....			17 per ct.
Amount of hospital-tax collected... Increase of hospital-tax collected during the six months ending Dec. 31, 1871.....	*\$126,427 77	*\$138,947 23	
Number of ports where hospital relief was furnished.....	75	75	
Number of ports where hospital-tax was collected.....	118	119	

* These figures represent the minor portion of the tax collected each year, the major amount being collected during the last six months of each fiscal year.

NAVY NEWS.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY SINCE MARCH 6, 1872.

- Assistant-Surgeon A. F. PRICE detached from the Juniata, and granted leave.
- Assistant-Surgeon PAUL FITZSIMMONS ordered to the U.S.S. Saranac.
- Assistant-Surgeon R. A. MARMION detached from the Saranac, and ordered home.
- Assistant-Surgeon P. P. BIELBY ordered to the Naval Hospital, Norfolk, Virginia.
- Surgeon P. S. WALES and P.-A.-Surgeon H. M. RUNDLETT detached from the U.S.S. Guerriere, and waiting orders.
- P.-A.-Surgeon Jos. HUGG promoted to Surgeon.
- Dr. R. C. PERSONS appointed Assistant-Surgeon.
- Assistant-Surgeon Wm. B. DAVIS to the U.S.S. Tallapoosa.

MORTALITY FROM SMALLPOX IN PHILADELPHIA.—The number of deaths from smallpox in Philadelphia for the weeks ending March 16 and 23 were respectively 120 and 94, of which 151 were of minors.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending	
	Mch. 16.	Mch. 23.
Consumption	52	56
Other Diseases of Respiratory Organs	56	58
Diseases of Organs of Circulation	22	22
Diseases of Brain and Nervous System	58	60
Diseases of the Digestive Organs	30	22
Diseases of the Genito-Urinary Organs	8	7
Zymotic Diseases	151	116
Cancer	6	5
Casualties	5	5
Debility	29	29
Intemperance	5	0
Old Age	14	13
Scrofula	2	1
Stillborn	14	15
Suicide	0	1
Syphilis	0	1
Tetanus	1	0
Unclassifiable	5	14
Unknown	1	2
Totals	459	427
Adults	214	192
Minors	245	235

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MARCH 5, 1872, TO MARCH 18, 1872, INCLUSIVE.

- EDWARDS, L. A., SURGEON.—By S. O. 63, War Department, A. G. O., March 14, 1872, relieved from duty in Department of Texas, to proceed to Philadelphia, Pa., and thence report to the Surgeon-General.
- HAMMOND, JOHN F., SURGEON.—By S. O. 63, War Department, A. G. O., March 14, 1872, to report to the Commanding General, Department of Texas, for duty as Medical Director.
- WIRTZ, H. R., SURGEON.—By S. O. 60, War Department, A. G. O., March 12, 1871, upon arrival of Assistant-Surgeon Girard in Department of Arizona, to report to the Commanding General, Department of California, for assignment to duty.
- BACHE, DALLAS, SURGEON.—By S. O. 57, War Department, A. G. O., March 7, 1872, relieved from duty in Department of Texas, and to report in person to the Surgeon-General.
- ASCH, M. J., ASSISTANT-SURGEON.—By S. O. 61, War Department, A. G. O., March 12, 1872, granted leave of absence for six months.
- McELDERRY, H., ASSISTANT-SURGEON.—By S. O. 61, War Department, A. G. O., March 12, 1872, after accompanying the first detachment of recruits sent to the Pacific Coast from New York, to report in person to the Commanding General, Department of the Columbia, for assignment to duty.
- GIRARD, JOS. B., ASSISTANT-SURGEON.—By S. O. 60, War Department, A. G. O., March 12, 1872, to report to the Commanding Officer, Department of Arizona, for assignment to duty.
- KIMBALL, JAS. P., ASSISTANT-SURGEON.—By S. O. 33, Headquarters Department of the Gulf, March 4, 1872, assigned to duty at Little Rock, Ark.
- MOFFATT, PETER, ASSISTANT-SURGEON.—By S. O. 60, War Department, A. G. O., March 11, 1872, assigned to temporary duty at Newport Barracks, Ky.
- KING, J. H. T., ASSISTANT-SURGEON.—By S. O. 62, War Department, A. G. O., March 13, 1872, to report to the Commanding General, Department of the Platte, for assignment to duty.
- CORSON, J. K., ASSISTANT-SURGEON.—By S. O. 20, Military Division of the Missouri, March 14, 1872, leave of absence extended thirty days.

MONDAY, APRIL 15, 1872.

ORIGINAL LECTURES.

ABSTRACT OF A CLINICAL LECTURE ON A CASE OF CARIES OF VERTEBRÆ.

BY H. C. WOOD, JR., M.D.,

Attending Physician to the Philadelphia Hospital.

GENTLEMEN,—The specimen before you to-day illustrates a rather rare affection,—namely, caries of the cervical vertebræ,—upon which I propose to make a few remarks. The case is interesting, as showing how the diagnosis is often very obscure early in the disease. Dr. Moritz Benedikt (*Elektrotherapie*) states that he has seen cases which were apparently simply eccentric cervico-brachial and intercostal neuralgia, but which time showed to be really commencing caries of the lower cervical vertebræ. Accordingly, in the patient from whom this specimen was taken, the first symptom was a persistent intolerable neuralgia, affecting both arms, though more unbearable in the right. Sooner or later, however, in most cases of caries of the cervical vertebræ, there is a marked enlargement of the vertebræ concerned, accompanied, or even preceded, by torticollis. Whenever, then, you have persistent cervico-brachial neuralgia followed by enlargement of the cervical vertebræ, always bear in mind the probability of caries. Do not lose sight of this probability because neither pressure on the part immediately affected, nor tapping upon the head, or passive motion, gives pain. At my last clinic you saw me perform all these acts without causing complaint; yet, as you see, there were no less than three vertebræ in an advanced state of caries. Until the opposing and articulating surfaces are involved, there is, indeed, in many cases not merely a capability of passive motion, but also a fair degree of voluntary movement possible.

The fact of enlargement of the vertebræ preceded by neuralgia and followed by partial paralysis does not, however, warrant absolutely a diagnosis of caries, for you will find described by Rosenthal, in *Zeitschrift für prakt. Heilk.*, 1866, a case of periostitis of the cervical vertebræ in which all these symptoms were present. Generally, the diagnosis of such a case can be made out by the existence of periostitis elsewhere, and by the form of the swelling. Instead of the latter being, as in caries, a large undefined mass, with projecting spinous process, often several small tubercle-like swellings can be distinguished upon the vertebral surface, cohering, it may be, or aggregated into one mass.

Again, it is possible that sarcomatous growths may occur in the cervical vertebræ, and, by pressure either on the cord or upon the nerve-roots, simulate caries.

According to Rosenthal (*loc. cit.*), the diagnosis can generally be made out by the local use of electricity. He says if the two electrodes of an induction apparatus be placed opposite one another upon the vertebræ in the normal condition, no pain is excited; but as the diseased spot is approached, burning and sticking pain begins to be felt, and becomes more and more severe, until at last it gets to be unbearable. This condition he has also noticed in some cases of tabes: so that it is not absolutely characteristic of caries, although apparently sufficient to distinguish it from any disease with which it is liable to be confounded. Unfortunately, this test was not applied to our case.

Another very important diagnostic use of electricity is by testing the electro-contraction of the paralyzed muscles. As is well known, when a nerve-trunk is pressed upon so that its function is interrupted, the

muscles which it supplies soon lose their electro-contraction. This deterioration often commences as early as the third day after the advent of the paralysis, and rapidly increases, so that even before the end of the second week it is complete. In other cases it is not at all manifest until the end of the first week; but when there is complete paralysis from pressure upon a nerve-trunk I believe the electro-contraction is always lost by the end of the third week, if not before. In acute myelitis, the electro-contraction often persists or is even abnormally active for a considerable time after the complete loss of voluntary motion.

In the paralysis of vertebral caries there is generally the same persistence of electro-contraction, showing that the paralysis is not due to pressure upon the nerve-roots, but to changes in the cord. Benedikt seems to believe that this shows that the trouble in the cord is always inflammatory in its nature. Be this as it may, the importance of the fact in a diagnostic point of view cannot be gainsaid. As you saw at our last clinic, there was no diminution whatever in the electro-contraction in the paralyzed muscles of our patient. If, however, the paralysis, instead of having the origin which it did, had been due to pressure on the nerve-roots from tumor or periosteal swelling, no response would have been elicited by the current. A very curious fact noticed was, that in the arm which had nearly lost its ordinary sensibility the electro-sensibility was much greater than in the other arm. The one arm might have a pin run into it without any complaint being made, whilst the induced current was bitterly complained of; the other arm, sensitive to the prick of a pin, seemed almost dead so far as sensibility to the galvanic current was concerned.

A diagnostic criterion insisted upon by Moritz Meyer is the frequent occurrence of reflex movements. He says, "Of these paraplegia there is a second and highly important diagnostic criterion,—namely, the reflex movements which occur in the paralyzed extremities whenever the lower part of the cord is subjected to pressure or the skin irritated, and sometimes through the influence of cold," etc. There can be no doubt about the fact that the reflex sensibility of the cord is often exceedingly heightened in these cases. Thus, recently I was consulted about a case in which a smack on the bare leg would cause it to fly upward as though the leg of a puppet moved with springs. Projecting stiffly at right angles to the body, it would remain so for a length of time if not put back, until at last, the muscles gradually relaxing, the leg would sink into its normal position. Sometimes these movements would be executed without obvious cause, and the sufferer, unable to assist himself, would call for the nurse to put his leg down.

In the woman whose case we are to-day especially studying, no such increase of the reflex excitability was present whilst she was under observation, nor, so far as known, did it ever exist. As to the cause of such differences, I do not care to-day to hazard an opinion.

S.; colored; aged 21 years. Has led an abandoned life, and been in the venereal ward of the hospital several times. Some three or four months since she suffered severely from neuralgic pains, more or less constant, but at the same time paroxysmal, commencing in the shoulders and shooting down the arms. Both arms were affected, but the pain in the right arm was much more intense. After these pains had persisted for an uncertain length of time, there appeared a lump in her neck; and shortly after this the pain began to subside in her arms, and she began to notice that they were growing weaker. Since the arms were affected the legs have been so also.

February 3, 1872.—Two weeks ago she could walk with difficulty, but has been quite unable to do so since. When

sitting on a chair she can place the left foot on another chair; she is unable to lift the right foot from the floor, but can move it about slightly. Right arm completely paralyzed, except that she can move the fingers slightly; somewhat oedematous. The use of the left arm has been gradually failing for two weeks at least, and she is not now able to raise it to the top of her head; but she can and does feed herself, although with difficulty. She has no perceptible loss of vision, no paralysis of face or tongue, no loss of hearing. She suffers no pain, except in the region of the sternum and under the right shoulder. Sits with head bent forward and a little to the left; does not move it.

There is a tumor occupying the whole cervical region posteriorly; hard and non-sensitive, somewhat pyramidal in shape, the apex corresponding to the third or fourth cervical spine.

Striking the top of the head downward gives no pain; moving the head laterally causes no pain. Neck is extremely rigid; but moderate twisting creates no pain. Attempts to straighten the neck give pain in the breast.

Electrical examination.—Right side: Muscles of foot respond very imperfectly to a strong primary induced current. Tibialis anticus responds to the primary induced current only when it is strong. When a very strong current is applied to the motor points of the gastrocnemius, it responds feebly, and apparently reflex contractions are excited in the extensors. In the thigh, the sartorius and quadratus femoris respond moderately well to a strong current.

Left side: Muscles of foot respond very imperfectly indeed. Decided loss of electro-sensibility in the left leg as compared with the right. Muscles of left leg make fair response to a very strong primary induced current. They respond better than those of right leg. In the thigh there is decidedly greater muscular sensibility in right than left. Muscles of left thigh respond imperfectly, but better than those of right. When tested with electrical brush, the right side is more sensitive than the left.

Right arm: Interossei respond well to primary induced current; also abductor of little finger, extensor of index-finger, extensor pollicis longus, and general extensor of fingers, all respond very actively,—much more so than the leg-muscles. Pronator radii teres and all the flexors respond exceedingly actively. The muscles supplied by the median nerve respond very actively to stimulation of the nerve by a primary induced current. Muscles of arm—biceps and triceps—respond actively.

Left arm and hand: The muscles respond no more than those of the right. Electro-sensibility decidedly greater in the right than in the left arm.

Sensibility.—On testing with the compass-points it is very difficult to come to an accurate conclusion, as her answers are very wild and non-agreeing. There is undoubtedly, however, great loss of sensibility in both legs, but the loss is more complete in the right than in the left leg. In the right arm sensibility is exceedingly slight; in the left arm it is only slightly diminished.

There are no spontaneous reflex movements of legs, and the hot spoon fails to produce them.

February 13.—All the muscles of right arm, forearm, and hand respond well to a secondary induced current. Those of the left arm also respond well. Electro-sensibility is greater in the right than in the left arm. Left arm is certainly weaker than it was a few days ago.

February 18.—Patient sinking. As there is a profuse foul leucorrhœa, and she has been passing her urine and fæces involuntarily, it has been almost impossible to keep her clean. Bed-sores are beginning to form on the paralyzed parts. She has been carefully watched to discover any unilateral sweating or inequality of the pupil, but neither has been detected.

February 20.—Dead.

Autopsy.—Externally to the bone and close upon the posterior surface of the spinal column is a long narrow abscess, extending from the third cervical vertebra to the second or third dorsal. All of the vertebrae beneath it are denuded and carious. The bodies of the fourth and fifth vertebrae are profoundly affected, and have evidently been the starting-point of the disease.

ORIGINAL COMMUNICATIONS.

NITRITE OF AMYL IN EPILEPSY.

BY S. WEIR MITCHELL, M.D.

I HAVE long desired to make use of nitrite of amyl at the outset of a case of epilepsy, but only of late have been so fortunate as to have charge of suitable cases. A case suited to make practicable the exhibition of this rapid agent should have some distinct aura or other form of warning symptom, and this must be of such a nature as to leave the patient long enough in possession of himself to enable him to employ the remedy.

A few weeks ago a young farmer consulted me as to a peculiar form of epilepsy, which seemed most suitable for testing the value of various modes of cutting off the attack by interfering with the early symptoms.

J. C., æt. 23, was excessively prone to self-abuse until, at the age of eighteen, he began to indulge to an extravagant extent in venery. At twenty he had a chancre, but thus far no secondary results. On the 4th of March, 1871, he became slightly intoxicated, went to a neighboring city, and for some days gave himself up to sexual excitements to such an extent, as he describes it to me, as to show that either he had unusual virile power or that he exaggerated his prowess. Be this as it may, there is no doubt that he ran into great excess, and that the punishment was distinctly born of the offence. On March 9 he felt feeble, but nevertheless had connection four times that night. On the 10th he had, twice, twitching of the left forefinger. On the 11th this grew worse, and on the 12th, after unusual sexual excesses, he had a prolonged spasm of the left arm. It began in the hand, and in a few minutes involved all the fingers in forced flexion. Then the wrist bent, and the flexed forearm was forcibly contracted. The attack, which surprised the patient but did not alarm him, ended with slight vertigo. A week went by without further trouble, when a series of complete epileptic fits began, always preceded by the local convulsion which I have described. The fits, which at first came on daily, soon lessened in number, and of late have recurred but once a week. On two occasions they have been sudden and without warning, but in all other cases the hand has been affected with spasm, followed in a few minutes by vertigo, twisting of the head to the left side, left unilateral convulsion, and finally bilateral spasms, with occasional tongue- or cheek-biting. The attack is followed by prolonged stupor.

Many remedies have been vainly employed, and even the bromides in full doses fail to do more than lessen the number of attacks; while strychnia, valerianate of quinia, zinc, and other agents have all alike failed to afford relief.

I made many experiments with a view to cutting short the fit by interfering with the precedent local spasm; but neither blisters along the nerve-tracks which are not tender, nor a ligature tightly applied, proved of any use. I then gave the patient a drachm of chloroform in a phial, directing him how to inhale it from a handkerchief, but soon found that he was unable to inhale enough of it to serve his purpose. As a last resort, I gave him in a very small phial three or four drops of nitrite of amyl, and showed him how to inhale it by putting the open phial up one nostril while with one finger he closed the other and then made a few full inspirations. The first attempt failed, because, as he said, the spasm of the left limb made him nervous. On the second occasion he began to breathe it the instant the fingers twitched,—having pulled the cork of the phial with his teeth. In a few moments he felt his face flush, the carotids beat violently, his head felt full, and, the spasm ceasing, the attack at once, and for the first time in his experience, was cut short. Four days later he thus cut short another attack; and the experiment has since succeeded in eleven fits, and failed, from too late use of the nitrite, in two. Moreover, the attacks have lessened in frequency, and now come on only once in ten to twenty days. Not only is there no evil effect from the drug, but his memory

has improved and his nutrition gained considerably. He is again taking bromide of lithium.

In a second instance of epilepsy, with aura proceeding from the right hand, the nitrite of amyl has been successfully used in two attacks; but commonly the cerebral phenomena in this, as in most cases, follow too soon to be of value,—or, rather, too soon to allow of time for the nitrite to affect the intracranial circulation.

This must, unhappily, be the case in most epilepsies; but in all which have an aura or local spasm distant enough in time from the cerebral symptoms, it may be of value, and ought certainly to be employed.

I hesitate, as yet, to speculate on the relations between the physiological influence of this interesting agent and the present views of the mechanism of epilepsy; but I do not feel justified in withholding any knowledge, however limited be the foundation on which it rests, when it has proved so distinctly valuable.

In another class of rare cases it may also prove of service. There are certain epilepsies in which the spasms last for hours,—one-fit following another. In these I commonly employ, with success, injections under the skin of bromide of lithium, using thirty or forty grains in three or four localities; but I have twice checked these attacks at once by inhalations of the nitrite of amyl. In one of them there was a second fit, but no more,—which was unusual. In the other, which lasts always several hours, I used the nitrite at the close of an hour, in the third convulsion. Relaxation instantly occurred; the fit passed off, and no other followed. Ether has been frequently employed in this case; but it merely mitigates the attack, and its use has to be kept up for hours.

TWO CASES OF "FROST-BITE."

BY J. H. T. KING,

Fort Ransom, D.T.,

Captain and Assistant-Surgeon U.S. Army.

NOTHING unusual or uncommon is claimed for these cases, nor yet any originality in the treatment. *Per contra*, they are simply recorded as illustrations of the surgical practice of this hyperborean region during our long and severe winters.

January 3, 1868, W. M., æt. 37, left Fort Totten, D. T., in company with two half-breeds, all travelling on foot, in charge of the government mail, which was carried on a dog-sleigh.

On January 6, when thirty-eight miles from the post, they were overtaken by a violent snow-storm, and had to seek immediate shelter in the nearest ravine, where they soon became buried in the snow, and so remained all night. Their sufferings were beyond description; the thermometer at Fort Totten indicated 40° below zero, and it seems miraculous that any of the party survived.

Next morning the hurricane raged with increased fury. W. M. felt sick and unable to move; the two half-breeds, however, started for a "mail shanty" about three miles off, which they reached safely, and would have returned with assistance to W. M. but for the terrific violence of the gale. The wind blew and the snow drifted to such an extent that it was impossible to see more than a few feet ahead.

Not until the fourth day—January 9—did this dreadful tempest moderate sufficiently to permit them to go in search of W. M. They found him roaming about on the prairie in a semi-insane state, eating a piece of one of the sleigh-dogs, and conveyed him to the "shanty."

At this wretched hut to which the half-breeds had conducted him W. M. was compelled to stay till February 10, when he was brought to Fort Totten in a half-starved condition, more dead than alive. On examination, both feet were found to be sphacelated, with the line of separation formed over the metatarsal bones. Four fingers on each hand were also mortified, the line of demarcation being near the metacarpo-phalangeal

articulations. The thumbs had escaped injury. As he had been thus helpless and neglected for weeks, the absolute necessities of life barely procurable, and not able even to feed himself, the *tout-ensemble* can better be imagined than portrayed.

There was considerable constitutional disturbance of an asthenic type, and great depression of the system; also a fungous appearance of the gums, pathognomonic of scorbutus.

On his arrival a full anodyne was exhibited, with brandy and beef-tea at intervals, to recuperate his natural powers preparatory to operative interference. Antiseptic remedies were applied to the feet and hands.

February 11.—Symptoms assuming a grave aspect. Amputation of parts of each foot and both hands was manifestly demanded, yet he was so much reduced and prostrated that it seemed questionable if he could bear the shock of an operation. At all events, it was determined to delay twenty-four hours longer, hoping that some amelioration might occur.

February 12.—Sinking rapidly; obviously no time to lose if anything was to be done. Acting-Assistant-Surgeon G. C. Douglass, U.S.A., who was on duty with me at the post at that time, coincided with my views of the case. Accordingly, the patient was placed under the influence of chloroform by Dr. D., and I performed "Hey's operation" on the left foot in the usual manner. A profuse hemorrhage took place, owing to the morbid condition of the man's blood peculiar to scurvy, and he fell into a state of syncope more than once before this (first) operation was concluded. Brandy had to be frequently administered. As he was now verging on collapse, I hesitated before proceeding with the right foot. Dr. D., agreeing with me that it was preferable, if possible, to amputate, I immediately operated by "Hey's method" on the right foot also, using all the expedition I could. Again the hemorrhage was copious; nevertheless, he passed through the ordeal better than we had anticipated. We next put him in bed, giving opiates and stimulants freely.

February 13.—Slight improvement. Amputated all the fingers on both hands, leaving a minute portion of the first phalanx of each index-finger.

February 15.—All the stumps dressed. No attempt at union.

February 28.—During the past two weeks there has been great loss of blood, on account of the constant oozing from the stumps, associated with hemorrhagic dysentery. The patient is terribly debilitated, and, there being neither vegetables nor fruit obtainable, it is difficult to remove his scorbutic diathesis.

It is superfluous to follow the daily history of the case. No union of any of the flaps was observable for many weeks; they required to be very carefully dressed every day, and retained in accurate coaptation by means of plaster. Chalybeates, styptics, and astringents were employed to arrest the incessant hemorrhages, and every attention in the shape of nursing; but had he not possessed an indomitable spirit he never could have endured such protracted suffering.

Fortunately, about the end of March some buffaloes were killed in the vicinity; and fresh buffalo-steaks at once started him on the road towards recovery. He continued gradually but slowly to gain, and in June all the stumps were firmly healed over, sound, and without a blemish. At this period he left for his home in one of the eastern States, and in the course of a few months was able to walk long distances without difficulty.

Private J., Co. F, 20th U.S. Infantry, admitted into the post hospital at Fort Ransom, D.T., 1.30 p.m., December 9, 1871.

At the time of his admission he was completely benumbed with the cold; pulse weak, tongue chilly to the touch, and both feet very badly frozen; the right foot solid as ice nearly to the tibio-tarsal articulation, and the left half-way to that point.

This soldier was instantly taken into a cold room, and both feet placed in a tubful of snow. Gentle friction with snow was continued for many hours over the congealed parts. The doors and windows of the room were thrown wide open, and every precaution was adopted to obviate restoring the vitality too rapidly. Temperature of atmosphere of room 15° F.

In two hours reaction commenced in the left foot, and the integument became much flushed. The right foot responded more slowly, and the frictions with snow were kept up for many hours.

During the above period small quantities of hot coffee, toast, and brandy were given.

It may not be unimportant to remark here that this patient had no pain whatever in his feet prior to the inception of treatment. About 6 P.M. he was placed in bed and ordered to have turpentine to the feet, and *R pil. opii, gr. j, secundis horis, si opus sit.*

December 10.—Feet oedematous and ecchymosed. Total anæsthesia of right foot below a point corresponding to the scapho-cuneiform articulation. Partial sensibility and cinesis in toes of left foot; pelioma in this foot more superficial. To have a mild but nutritious diet, opium when necessary to relieve pain, and to persevere with the terebinthinate remedies locally.

December 15–22.—No material change occurred for some days. From the second day after admission it was obvious that neither professional skill nor the "*vis medicatrix nature*" could save the right foot. His left foot, however, rapidly recovered,—the injury being confined to the cuticle and the extremities of the toes.

The man's health was far from satisfactory. Bronchitis supervened, and afterwards an attack of conjunctivitis, which required the usual medicaments.

December 23.—The right foot being gangrenous and the line of demarcation properly defined, it only remained to determine what operation should be performed in order to make the most useful limb. Chopart's was precluded, owing to the impossibility of obtaining sufficient flap from the plantar surface; and the choice seemed to rest between Syme's and Pirogoff's. The latter was selected.

December 23—noon.—Performed "Pirogoff's modification of Syme's operation at the ankle-joint,"—amputating right foot. The customary incisions were made, and the bones divided and separated in the usual way. Only one vessel—the anterior tibial artery—needed ligation. Water-dressing was laid along the wound, and a few turns of a roller-bandage over all.

It would occupy too much space to repeat the daily treatment of this soldier. He had a mild attack of traumatic fever on the second day. On the fourth day the stump was dressed, and a three per cent. aqueous solution of carbolic acid applied. The leg was elevated, and no covering put on the stump except a piece of linen saturated in the acid and kept constantly moist with it. On several occasions he suffered from rigors, and a tendency to collections of pus in the sheaths of the tendons on the inner side of the right leg, as often happens after this operation. Prompt attention relieved this, by giving the discharge free exit as it accumulated.

On January 14 he was able to move about the ward on crutches; the incision of stump almost healed over.

At this date, February 20, 1872, he has been perfectly well for some time, and has a remarkably healthy stump. He can bear the entire weight of his body on it and walk, only using a cane. There is much less shortening than usual; his right leg is barely half an inch shorter than his left.

A CASE OF RETROVERSION OF THE UTERUS;

WITH CONVULSIONS, PARALYSIS, LOSS OF POWER OF ARTICULATION, ETC.—RECOVERY.

BY RICHARD THOMAS, M.D.,
Philadelphia, Pa.

MISS B., aged 34, an invalid, residing in this State, was, in the latter part of July, 1871, brought to this city. After resting a brief period, she was taken to the sea-side, where it was hoped her condition would be improved, or at least an opportunity would be afforded her of experiencing such benefit as might reasonably be expected from change of scene, invigorating air, and salt-water bathing.

Upon her arrival at the sea-side she became the patient of a medical gentleman from this city, and remained in his charge until August 10, when I was called in consultation. At this time I found the patient

in bed, extremely emaciated, semi-conscious, speechless, making a peculiar unpleasant sound as she made vain attempts to reply to our questions. The arm and leg of the right side were paralyzed,—retaining sensation, however, and their normal temperature. I observed her closely; at times her position was one of apparent collapse, but generally she displayed great nervous excitement, moving the head from side to side. She had an anxious expression,—at one time pale, at other times flushed. She carried her left hand frequently, in an automatic manner, to her head,—evidently endeavoring to relieve some distressing sensation there.

Her pulse, which showed considerable debility, was still, under the circumstances, very good: being about 76, regular, and calm. The temperature of the body seemed quite normal. The urine was dark in color, of a pungent odor, and scanty. The bowels, I was informed, had been obstinately constipated for some days.

From the gentleman in charge of the case, I learned that he thought the symptoms depended on an organic disease of the brain and spinal cord. His treatment had been directed towards lessening the brain-excitement, as well as towards removing apparent congestion of that organ. He had endeavored to build up the general health, and to overcome constipation. With these ends in view, cold applications had constantly been made to the head. He had also given his patient a rich diet of oysters, puddings, eggs, brandy, and milk-punch, and had ordered daily drinking of seawater, to assist the bowels to perform their proper function. After ten or twelve days thus pursued, the patient gave evidence of slightly-increased tone, and her friends had apparently some grounds for congratulation; but, just as a feeling of hope began to be entertained by all, she one day exclaimed, "Oh, dear!" and was seized with convulsions, which lasted, without any positive intermission, for twenty-four hours. It was when she had just emerged from this terrible condition of spasm that I was called to see her.

I will briefly narrate her history before coming to Philadelphia in July, 1871, as given me by a member of her family, whose intelligence and interest in our patient's welfare make her a reliable authority. It was as follows: Since the year 1866 there had been considerable difficulty in menstruation. Pain had been generally present during all this time; particularly was this the case in the sacral region. There had been much general distress,—pain in the head, vertigo, general restlessness, etc. All these symptoms were augmented at each menstrual period. Constipation, of a very obstinate character, was frequently experienced. About the year 1870 her general health began to decline rapidly, and menstruation—which, although attended with much irregularity, had still been performed—ceased entirely in August of that year, and did not reappear. During the following months of September and October she was in great distress, the symptoms mentioned being greatly aggravated; and during the latter part of October she was suddenly seized with convulsions, lasting some hours. For two weeks following this attack she was greatly prostrated, entirely speechless, and had frequent "tremblings" and great "nervous agitation." The bowels at this period were not moved for several days at a time. "The urine was thick and black." After a time she gradually improved in some particulars; but, for ten months following her first convulsive attack, she experienced every three weeks similar seizures.

She had received medical attention in her native place: such attention being chiefly directed to the head and spine,—it being the impression that there existed structural changes in both brain and spinal cord. Ice had been applied to the head, and blisters to the spine. Tonics had been given to improve the general health.

Efforts were made to relieve the bowels, whose remarkable constipation seemed very singular, and not to be easily overcome.

I gleaned enough from the foregoing history to justify me in suspecting some aggravated form of uterine difficulty; and upon my second visit to her I made a vaginal examination, using a speculum. Such an examination, I learned, had never before been made or suggested. The vagina and appendages appeared entirely natural, save at the upper portion, where the vagina was of a dark-red color and was bathed in pus. The os uteri was detected high up behind the pubes, quite swollen, dark red in color, and covered with ulcerations. A fissure, an inch or more in length, extended from the left internal margin of the os into the body of the cervix. The body of the womb was felt through the rectum, low down, and beyond the tumor thus formed the finger was passed, by using some considerable pressure. When the finger was partially withdrawn, the womb could be felt resting firmly on the bowel. The sound was readily introduced into the cavity of the womb, but it passed in with its curve directed *downward and backward*. The whole organ was extremely sensitive, and apparently congested.

Entirely satisfied that this condition of complete retroversion was the cause of all our unhappy patient's trouble, I proceeded to restore the womb to its normal position. This was accomplished far more readily than I could have hoped. The moment I reversed the position of the sound, an attempt at defecation was made, and there escaped from the rectum a considerable quantity of gas. After some five minutes, during which time the sound was held firmly, fixing the womb in position, it was withdrawn, and I was rewarded by finding that the os had not resumed its old foreign position, neither did the fundus impinge on the bowel.

The suffering of our patient was in a few hours afterwards greatly alleviated; much of her habitual restlessness and pain in the head had disappeared, and she gave unmistakable signs of being generally more comfortable. Still, the picture she presented was a sad one indeed: she was speechless and paralyzed, while her countenance betrayed the absence of her wonted mental power. Two days following the replacement of the womb the bowels were moved twice, naturally. I now ordered her fruit, mush made from unbolted meal, and cream. Of these articles she partook sparingly during the next two weeks, when she was allowed to indulge more freely, but without any change in diet. She was allowed no tea or coffee; stimulants were also strictly withheld, as well as any medicine containing alcohol, since it was found that even the smallest quantity of stimulant caused flushing of the skin, restlessness, and vertigo. As soon as the patient was strong enough to be moved, hip-baths of warm water were made use of,—generally once a day: these baths acting like a charm in soothing the general system, relieving the head, and inducing sleep. At the expiration of two weeks she was able to sit up in bed, leaning on the shoulder of her nurse; and at this time she gave many welcome indications of returning interest in affairs going on about her. She had become calm, did not complain, and her strength increased daily; indeed, in many ways giving unmistakable evidence of recovery. Somewhat later, the power of articulation returned in a degree. She was now able to pronounce some few short words, as "Yes," "No," "Doctor," etc., but could not connect any two words; nor could she spell a word of more than six letters, and that only in a slow, deliberate manner, often utterly failing to pronounce it at its termination. She was unable, at this time, to keep her eyes fixed on a newspaper more than a few seconds at a time, owing to nervous agitation which such an effort invariably induced. The right

arm and leg unchanged. Her sleeping also began to improve about the second week; it was tranquil, and of some hours in duration. Her bowels continued to act regularly every day, naturally.

At the end of August I returned to this city, whither Miss B. followed in a day or so, when my treatment of her case was resumed,—it now having passed entirely into my hands. Her diet remained unchanged, save the addition of a few trifling delicacies of a mild character. By October 1 she had improved in many respects: appetite good; sleep uninterrupted during the whole night, lying upon her side,—which position it had been impossible for her to assume for more than two years; no pain of importance; head tolerably free from unpleasant sensations; bowels still regular; urine normal.

October 13, *menstruation*, after an absence of ten months, *was resumed*, and up to the present time has been regularly and perfectly performed.

Now began rapid changes. Every symptom improved; so that by January 1, 1872, the rigid contractions of the right arm and leg had perceptibly disappeared,—the muscles gradually regaining their natural condition and coming under the control of the will. With some slight assistance, the patient was able to walk the length of her room. I encouraged this exercise, and had the satisfaction of seeing it followed by increased general strength.

The paralysis of the right arm and leg was of the hysterical type, as will be seen from the following facts. During sleep, the paralyzed limbs were observed to be moved with much freedom. This was particularly the case with the arm, which the patient used frequently to remove flies or mosquitoes alighting on her face; the leg was drawn up, or extended. But when awake, if an attempt was made to flex or extend the arm or leg, there ensued a rigid contraction of the muscles concerned in these movements, making it nearly impossible to accomplish. This resistance invariably occurred, during the earlier part of her treatment, if her mind was occupied with the manipulation; but when her attention was otherwise directed, I was able to make flexion and extension readily. The sensitiveness of both arm and leg remained perfect. In short, the muscles had lost none of their power to act, but they were not subject to the will,—were under no control, save that of a perverted condition of the general nervous system, which allowed those inharmonious tendencies so often observed in hysterical affections the result of reflex irritation.

About January 1 she also gradually improved in reading, being able to read the correspondence of her friends with some degree of satisfaction. Letters six and eight pages long were read without any great difficulty, and in a tolerably well-pronounced manner. Printed matter she was unable, at this time, to read at all,—strange though it may appear.

The pulse throughout her entire illness, while under treatment by me, seldom varied: being, on an average, 75 to 80; never higher than 82, nor lower than 70. The approach of the menstrual period, since its resumption in October, 1871, has been marked by some slight flushing and restlessness; but its actual performance is unaccompanied by any other than perfectly natural phenomena. The voice has lost its unpleasant nasal character, and her expression of countenance has become bright, intelligent, and cheerful.

At the date of writing, she enjoys good health, has no pain, has a good appetite, sleeps well, walks without assistance, is regaining the use of her arm, converses well, and menstruates regularly. She has not had a single convulsion since I first saw her, and her weight, which in August, 1871, was 90 pounds, has increased to 120 pounds.

The treatment pursued in this case has been simple, —unmarked by much change. It was as follows: From

August 15 to October 20 (1871), injections were made into the cavity of the womb daily for the first two weeks, solutions of nitrate of silver being used,—five grains to the ounce of cold water; every other day for the two weeks following, the strength of the solution being increased to ten grains. For the remainder of the period mentioned the injections were made every three days, with a solution of nitrate of silver, twenty grains to the ounce. During the last week, tannic acid—three grains to the ounce—was substituted for the silver. The ulceration of the os and fissure of the cervix rapidly disappeared, under repeated applications of the solid stick of nitrate of silver. Frequently, during the first two weeks, large foul-looking sloughs of a dark-greenish color, streaked with blood, came away by the force of the injections, which were made with one of Mattson's syringes, through a double fenestrated catheter.

These injections of the cavity and applications to the os had the effect of reducing the size of the womb, also relieving pain and tenderness. Their employment was followed by so much improvement that at the time mentioned they were discontinued, as I deemed their use no longer indicated. In this conclusion I was justified, also, by the very important fact that the womb was retained in good position. No instrumental measures were made use of to effect this retention, other than the frequent introduction of the sound.

The constitutional treatment consisted of decoctions of the root of *Cimicifuga racemosa* (black snake-root) and *Cunila mariana* (American dittany), in equal parts combined. I used decoctions in order to dispense with any stimulant which might have been present in other forms of administration. This decoction was frequently made, and given, for the first five months, three times daily; the dose being a wineglassful, gradually increased to three times that quantity. This remedy acted like a charm, allaying pain and nervous excitement. Its effect was also antispasmodic,—which I attribute to the dittany,—while its general tonic effect was marked. Iron, quinia, pil. ferri carb.,—the latter combined with ext. conii,—were given in the order set down. At this date I am giving a simple preparation of iron as a general tonic.

Throughout the entire period of her treatment by me, Miss B. has not taken a drop of alcoholic stimulant.

16 N. ELEVENTH ST., March 1, 1872.

PRIMARY CANCER OF BLADDER.

BY JOHN ASHHURST, JR., M.D.,

Surgeon to the Episcopal Hospital; Surgeon to the Children's Hospital, etc.
Read before the Pathological Society of Philadelphia, March 14, 1872.

PATRICK L., an Irishman, 45 years of age, and by occupation an engineer, was admitted to the Episcopal Hospital on January 22, 1872. For seven months his health had been gradually failing, his principal annoyance being from painful and frequent micturition, and from attacks of spasmodic cramp in the lower part of the belly; the spasms coming on very suddenly, and, as he expressed it, forcing him to "double himself up" by the violence of the pain. About five weeks before his entrance to the hospital he had noticed the presence of a hard mass in the supra-pubic region, but he had continued to work almost if not quite up to the date of his admission. He coughed somewhat; but this he attributed to a catarrh, which he supposed he had caught during the prevailing bad weather.

Upon examination, the patient was found to be a man of strong frame, and fairly well nourished. A hard tumor was readily felt above the pubes, and, by means of the finger in the rectum, was recognized as a cancerous mass encircling the urinary bladder. The prostate was not markedly enlarged, and the rectum itself appeared healthy. A catheter was introduced, and a small quantity of urine evacuated, showing

that the cavity of the bladder was contracted, and that there was no retention. No hemorrhage followed the withdrawal of the instrument. There was slight dulness on percussion over the posterior part of the chest, especially on the left side, and there was a corresponding deficiency of the respiratory murmur. The parietes of the abdomen were at this time freely movable over the vesical tumor.

The treatment, of course, was merely palliative, consisting chiefly in the use of opium suppositories, the exhibition of iron and quinia, and the administration of as much easily-digestible food as the patient could assimilate, with a moderate amount of alcoholic stimulus. An occasional dose of an anodyne and expectorant mixture served to allay the cough when it was more than ordinarily troublesome. From the time of the patient's admission until that of his death (a period of nearly six weeks), he suffered, according to his own statements made in answer to repeated inquiries, absolutely no pain; the cramp-like spasms disappeared, doubtless under the influence of rest, and, except for a feeling of extreme prostration and debility, the patient's state, as regarded his own sensations, was in no degree one of discomfort.

For the first fortnight there was no decided change in the patient's condition, but from this time his strength rapidly failed. He became exceedingly emaciated; the so-called cancerous cachexia was developed in a marked degree; he became fatuous, and ultimately delirious (always, however, answering when spoken to, and constantly averring that he felt no pain), and, during the last periods of his life, presented an extremely pitiable appearance—continually soiling his beard and pillows with his expectoration, and passing both urine and feces involuntarily in his bed. In fact, his urine ultimately dribbled from him all the time,—the cancerous growth appearing to have so fixed the neck of the bladder as to prevent its retaining its contents. At no time did he pass any blood, either by the urethra or by the rectum, but his stools contained large quantities of fetid mucus. The abdominal parietes became adherent to the tumor some weeks before his death, which ensued, apparently from pure exhaustion, on the evening of March 2.

A post-mortem inspection was made two days subsequently, the thoracic and abdominal viscera being alone examined. The original seat of disease was found to have been in the walls of the bladder, which were infiltrated with cancerous material, the neoplasm having also invaded the abdominal parietes, and having involved in its growth the rectum and several coils of the lesser bowel, though it did not seem to have implicated either the intestinal or the vesical mucous membrane. The cavity of the bladder was found, as had been anticipated, much contracted. The kidneys were large and their pelves much dilated, as were the ureters. The liver presented the appearance known as "nutmeg liver," while the spleen and other abdominal organs seemed healthy. Both lungs, but especially the left, contained numerous deposits of a material which in its naked-eye appearances resembled the vesical growth, but which, as will be seen by the report of the microscopic examination,* was of a non-cancerous nature. Both pleural cavities were the seat of old and quite firm adhesions. The heart was fatty, but seemed in other respects free from disease.

Remarks.—Apart from the rarity of cancer of the bladder occurring as a primary affection, this case presents several features of interest both clinically and pathologically.

(1) The absence of pain during the latter stages of the affection, and the entire freedom from hæmaturia, are both unusual, but are explained by the fact—revealed at the post-mortem examination—that there was no ulceration of the mucous surface of the bladder.

(2) The rapid development and great intensity of the so-called "cancerous cachexia," in connection with the occurrence of pulmonary disease which was not cancerous, are of interest, as illustrating the fact that this cachexia depends rather upon the implication of vital organs than upon the extent and duration of

* See Report of Committee on Morbid Growths, page 272.

cancer as a special form of new growth; the "cancerous cachexia" is not particularly well marked in cases of uncomplicated cancer of the bladder.

(3) The rapid course of the affection, and its early termination in death before the vesical growth had advanced to the stage of ulceration, were evidently owing to the condition of the lungs—the fatal issue being in fact due to pulmonary disease, and not to vesical cancer.

ON THE SWALLOWING OF INSOLUBLE FOREIGN BODIES BY CHILDREN.

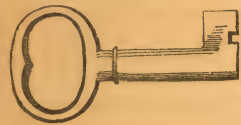
WITH TWO CASES.

BY JOHN H. PACKARD, M.D.,
Philadelphia, Pa.

NOTWITHSTANDING the apparently great risk of impaction of the coins, pins, or other insoluble bodies so often swallowed by children, it is very seldom that any serious trouble occurs; probably because the thick mucus lining the intestinal canal, and the accumulation of fecal matter around the foreign body, prevent the latter from becoming entangled, and bear it on with them until it is expelled per anum.

I feel the less called upon to apologize for reporting the following cases, since quite recently the subject was deemed important enough to be discussed in several communications to one of the leading London journals; the exact reference has unfortunately escaped me.

Case I.—September 5, 1868, a child of Mr. S., æt. four months, swallowed an iron box-key, of which the annexed cut is an accurate outline. It was one and three-sixteenths of an inch long, and five-eighths of an inch wide. Before coming to me, the mother had given the child a teaspoonful of castor oil. I advised letting him alone and watching the



evacuations. (They had already begun feeding the child, young as he was, with bread and milk.)

September 7.—At about 8 A.M. the child had a large passage, and the key came away easily, forty-eight hours from the time it was swallowed.

Case II.—January 19, 1872, Mr. V.'s child, æt. ten months, was much troubled by the irritation of a tooth just coming through. The mother was rubbing the gums with a silver safety-pin of the exact shape and size shown in the cut, when



it suddenly slipped into the pharynx and was swallowed. A dose of oil was immediately given, and next day the father came to me. I advised the same course as in the last case; and on the 29th, ten days after the pin had disappeared, it was voided by the anus.

The first idea that occurs to the popular mind in such cases always is to give a purgative. The disadvantage of this course, however, in stimulating the bowel to contraction and thereby endangering the entanglement of the foreign body, must be at once evident, and is pointed out by Cooper Forster, Holmes, and others. If the child is old enough to eat, the food given should be such as to produce a large fecal formation.

Several years ago, while visiting a patient, I was called into the next house to see a child who was said to have swallowed a nickel cent. A few days afterwards, inquiring how the child was, I was told that after I had gone away the coin had been found on the floor. The child had dropped it instead of swallowing it.

A CASE OF MOST EXTENSIVE PERICARDIAL ADHESION,

WITH OTHER CARDIAC LESIONS.

BY W. H. WEBB, M.D.

I OFFER the following interesting case to the notice of the profession. Pericardial adhesions in a lesser degree are not uncommonly met with post mortem, but I feel assured that the case I now report is unique in many of its features.

Anderson S., ten years of age, was a bright, intelligent lad, well grown, but emaciated in body and limbs, having been an invalid all his life.

The following history of his infancy and childhood has been furnished me by his parents. At six months of age he had marasmus, from which he recovered after about three months' illness,—remaining comparatively well three years, when he was attacked with atony of the bowels. This was soon followed by bilious fever of four or five weeks' duration. Between this time and his fifth year he had chicken-pox, measles, and whooping-cough. After his fifth year he had an attack of mumps; afterwards he was troubled with headache, which was very severe in character. When about six years of age he had rheumatism for the first time. In the spring of his seventh year he had scarlet fever, which confined him to his room for five weeks. In the summer of the same year he was seized with rheumatism, and, being in the country at the time and under the care of a very attentive nurse, he speedily regained his usual health. Occasionally, since the attack last referred to, he has had repeated though slight attacks of rheumatism, and in the spring of 1871 he was violently attacked with the same disease, which was followed by typhoid pneumonia.

I was first called to see the lad in the spring of 1871; he was then suffering from his old enemy—rheumatism. On a physical examination of the chest I found so large an area of cardiac dulness, accompanied with mitral regurgitation, that I looked upon the case as a medical curiosity; and, on showing the little patient to my friend Dr. DaCosta, he remarked that such extensive cardiac lesions were rarely met with in so young a child. I prescribed for him, but, he being unwilling to take the medicine, I withdrew from the case, and he was then placed under the no-treatment of homœopathic practitioners; and, notwithstanding he had been in their hands all his life up to the time I took charge of him, the cardiac lesion, which no doubt had existed for a long while, had never been recognized.

I was called again to see the little fellow January 30, 1872, for his "heart-trouble." He labored under the most intense dyspnoea, being obliged to assume the semi-recumbent position to facilitate breathing. His respirations were 54 per minute; his pulse 130, full and jerking; tongue slightly coated; anorexia; bowels constipated. Cardiac examination revealed two murmurs: one at apex and one at base. Percussion-dulness was four and a half inches at base and five and a half inches on a line drawn from mid-sternum to base to apex, which was two and a half inches below and to the left of left nipple. There was congestion of the lungs,—of the left more than the right,—with some mucous râles at left apex posteriorly. There was some cough, with slight expectoration, frothy and tenacious in character. There was no dropsy. *Urine free from albumen.* The abdominal veins were quite prominent, though not distended; jugular veins considerably enlarged, and pulsation in them quite perceptible. Indeed, the pulsation of the vessels of the neck was painful to witness,—the heart's action being so violent as to give motion to a large bedstead on which the little sufferer lay.

The child was somewhat relieved for a while under the administration of the most powerful cardiac sedatives, but finally succumbed on the morning of February 10.

Autopsy—in which I was kindly assisted by Dr. Beecher, forty hours after death.—Thoracic cavity only inspected. There was marked congestion of the lungs,—the left more than the right; in fact, the lower posterior portion resembled the second stage in a pneumonic lung. The adhesions in the left pleural cavity were very extensive and numerous; some

of long standing, while others seemed of more recent formation. The right lung had several old adhesions, with some serous effusion in the cavity.

The heart was of enormous size, weighing at least one pound and a half. The pericardium, which was much thickened, was adherent throughout, and it was impossible to separate the smallest portion without laceration of the heart-tissue. The muscular walls of the ventricles, especially of the left, were very thick. The cavities of the heart were dilated. A large yellow heart-clot about the size of a small walnut was found in the right auricle; some of the prolongations were lost between the musculi pectinati of the auricle, while others extended through the tricuspid orifice and were lost between the columnæ carneæ and chordæ tendinæ of the ventricle. In the left ventricle also existed a large clot, somewhat flattened and entangled in the columnæ carneæ; a prolongation of this clot extended through into the aorta as far as the left subclavian artery. This seemed to be fibrinous in character, and both gave evidence of having existed for a considerable time. All the valves were opaque, thickened, and slightly nodulated. The aortic valves particularly presented these features, being quite stiff and the margins curled inwards towards the sinuses of Valsalva,—the leaflets not being able to form perfect closure in consequence.

The aorta above the valves was much dilated, and on the posterior part encrusted with atheromatous deposits, giving the appearance met with in an aged person.

With such a multiplicity of disease of this all-important organ, the query is, How did this little patient live? and not, Why did he die?

NOTES OF HOSPITAL PRACTICE.

WILLS OPHTHALMIC HOSPITAL.

SERVICE OF GEORGE C. HARLAN, M.D.

Reported by CHARLES K. MILLS, M.D.

SYPHILITIC IRITIS.

E. L., æt. 22, seven months before coming to the hospital had first been troubled with sore throat. She stated that her tonsils had been lanced, and portions of them excised, a number of times. On examination, her throat was found to be in a granular condition, and the right tonsil deeply ulcerated. About one month after her throat became affected, an eruption appeared on her face, shoulders, and arms, the remains of which, copper-colored, indicated its syphilitic nature. Still later her joints had become stiff, swollen, and painful, and nodes formed on the spines of the tibiæ; she was sleepless, had no appetite, and suffered almost constantly from nausea and vomiting, and neuralgic pains.

Ten weeks before her first appearance at the clinic, her eyes had commenced to inflame; and, when first seen, each eye presented the appearances of severe iritis. Atropia had fortunately been used.

The pupillary margins of both irides were much thickened. Posterior adhesions had formed in several distinct points. The pupil of the left eye was dilated, and had much the shape of the conventional five-pointed star. The pupil of the right eye was also irregularly dilated, but not to so marked a degree as the other.

In this case the tuberculous nodules, or gummata of Virchow, were beautifully shown. Three of these, very vascular, and of a yellowish-red color, were projected from the front surface of the left iris into the anterior chamber. One of them, of a yellowish hue, was situated on the anterior surface of the right iris, at its lower part.

A punctated opacity overspread about one-half of both corneæ, which were surrounded by distinct vascular zones, most prominent near the gummata. No marked conjunctivitis was present.

Vision in the left eye equalled only $\frac{5}{60}$, and in the right but $\frac{10}{60}$.

Atropia was prescribed for the eyes, and mercurial inunction ordered.

CORNEITIS FOLLOWING SMALLPOX.

N. F., æt. 9, had recently recovered from an attack of smallpox, of the discrete variety, but severe, as indicated by the pitting of his face and body. Before this sickness his eyes were sound. He stated also that they were not very troublesome during his illness, but as he got better the eyelids were slightly adherent. He was not aware, however, of any marked bad effects, until two weeks after he was able to be out of bed, while the crusts were still falling off; when the left eye became inflamed and painful, gradually getting worse until the time of applying for treatment, two weeks later.

The cornea of the affected eye was slightly hazy over its whole surface, and a broad sloughing phlyctenula extended from near the base of the cornea to within about two lines of its centre, the phlyctenula being connected by a leash of vessels with the conjunctiva, which was much engorged. Vision in this eye was $\frac{10}{60}$.

He was immediately placed upon tonics, and atropia was instilled and calomel insufflated into the eye. After three weeks under this treatment, the patient returning to the clinic every other day, the cornea had cleared up, the conjunctivitis had subsided, and the phlyctenula had almost disappeared.

SEVERE INJURY OF THE CORNEA.

P. M., æt. 60, a laborer, pressed a small piece of coal into his eye while washing his face. Three days afterwards, when admitted to the hospital, the eye was terribly inflamed and painful. He had little appetite, and was weak, sleepless, and feverish. The coal had penetrated the cornea and lodged between its layers, where a slough had formed, which extended rapidly. The conjunctiva was highly congested. No corneal vessels could be made out.

He was put to bed, and kept there for ten days; a strong solution of atropia was daily instilled; the artificial leech was applied for three nights in succession, and hot-water cloths for a week.

Paracentesis of the cornea was now resorted to, but, having proved ineffectual, an incision about $\frac{1}{4}$ " long was made in the cornea with a Græfe cataract-knife, and a large slough removed from between the layers.

The sloughing was checked at once. Four weeks after admission the eye was much improved, the pain and inflammation gone, and the patient's general health restored. He could count fingers at one foot. The uninjured eye never became sympathetically affected.

WOUND OF THE SCLEROTIC.

F. M., æt. 35, laborer in a saw-factory, two days before applying for treatment was struck in the left eye with a small splinter of steel, which had grazed the edge of the upper lid, and then made a vertical wound in the sclerotic, three lines long, and situated on the inner side of the eye, a little anterior to the equator of the ball. The vitreous protruded through the opening, and escaped freely on slight pressure. The patient experienced but little pain, and vision in the injured eye was not much affected. When first seen, the media were clear and the fundus normal.

The cut in the sclerotic was united by a single stitch, and the patient put to bed, with his eyes sealed up, for four days. Atropia was daily instilled.

At the time of his discharge,—about ten days after the injury,—when all inflammation had subsided, vision equalled $\frac{20}{60}$; and by the ophthalmoscope the vitreous was found to be hazy, and to contain floating-shreds, the fundus being lighted up with much difficulty.

The patient continued to report at the dispensary-service, and the stitch was not removed from the sclerotic until three weeks after its introduction. At the time of its removal the fundus could be well illuminated, and the vitreous was found to be nearly cleared up, although there were still a few floating shreds to be seen. The patient complained of muscæ volitantes. The acuteness of vision was now normal: $V = \frac{20}{XX}$.

TWO CASES OF SYPHILITIC KERATITIS.

R. C., æt. 16, an errand-boy, presented himself at the clinic about the middle of February, 1872. Three years before, he

had been under Dr. Harlan's care, at which time he was for several weeks almost blind,—both corneæ being quite opaque, and his eyes much inflamed.

His parents both died when he was five years old; and he had been told that his mother died of paralysis, and his father of consumption. He never had any sisters, but had had two brothers, one of whom lived only one year, and the other ten years. On the death of his parents he was placed in a children's "Home," and while there he had three or four attacks of "sore eyes." He remained in this institution four years, when he was bound out to a farmer, with whom he continued until the time of his first coming under the notice of Dr. Harlan, three years since.

The lymphatic glands of his neck had been much swollen at different times. He had been deaf in his right ear as long as he could remember, and for six months the hearing of his left ear had been failing.

His physiognomy indicated hereditary syphilis. His complexion was dull, and the bridge of his nose was flattened and wide. His teeth were typical. The lower incisors were regular, but small and discolored. One of the upper incisors exhibited a broad notch; another, two small notches; the remaining two were small, and one of them peggy; all were irregularly set and discolored. Both corneæ were flattened, and showed a very slight haziness. The pupil of the right eye was slightly dilated, but movable; that of the left was much dilated, irregular, and immovable. No atropia had been used in his eyes for at least a year. His acuteness of vision for the right eye was $\frac{20}{60}$; for the left it was $\frac{20}{60}$.

Iodide of potassium had been prescribed for this patient before, and this treatment was now ordered to be renewed.

M. S., æt. 11, a school-girl, who came to the hospital March 18, was another case of interstitial keratitis, doubtless consequent on hereditary syphilis.

Her mother and father, both aged 41, were still living; and according to the statements of the girl's grandmother, who accompanied the child, the former had always been well, while the latter was never healthy, and had had several bad attacks of rheumatism. She had three brothers living and well; but nine other brothers and sisters had died before reaching the age of six years,—all having been "weakly" children; one was still-born.

She had been troubled with nasal catarrh, varying in severity, since quite an early age; and she had also been afflicted with large glandular swellings about the neck: one enlarged lymphatic gland was found on examination. For several years she had been affected, at intervals of two or three months, with a severe sore throat. Her voice was a little husky; and both tonsils and the pharynx were found to be ulcerated.

She had apparently sound eyes, and had enjoyed good sight until two weeks before appearing at the dispensary-service, when first her right eye, and, in a day or two, her left, began to inflame. The conjunctivæ were a little congested. Epithelial zones were evident around both corneæ, but this vascular band was most marked in the right eye. Both eyes were slightly intolerant of light, and a diffuse punctated opacity overspread both corneæ. Occasionally she had sharp pains in her eyes. Vision in the right eye equalled $\frac{18}{60}$; in the left, $\frac{3}{60}$.

Her physiognomy and teeth were characteristic. The bridge of her nose was wide and sunken. Her lower teeth presented nothing typical; but the two central upper incisors had broad notches and were small, while the other teeth were misshapen and irregular. The upper front teeth were so placed, and varied so in size, as to give this part of the jaw a peculiar arched appearance.

Atropia was instilled, and she was ordered three grains of iodide of potassium three times daily, and a collyrium of bi-borate of soda in infusion of sassafras-pith. She is still under treatment.

A PARASITIC DISEASE OF THE TONGUE.—M. Raynaud has recorded a case (*Archives Générales*, January, 1872) in which he found spores upon the tongue, presenting a very great similarity to, if not identity with, those of the trichophyton tonsurans.

In a paper read before the Royal Medical and Chirurgical Society (*Lancet*, February 24, 1872), Dr. Broadbent advances a theory of the mechanism of thought, founded partly on his own researches into the structure of the brain, and partly on the phenomena observed in cases of so-called aphasia; and his views may thus be briefly stated: In regard to structure, he believes his dissections demonstrate that the radiating fibres issuing from the central ganglia are chiefly if not exclusively distributed to the convolutions forming the margin of the great longitudinal fissure and those forming the margin of the fissure of Sylvius, and the parts adjacent both in front and behind; that the fibres of the corpus callosum are distributed to these same convolutions; that there are convolutions, as those on the under-surface of the temporo-sphenoid and orbital lobes, island of Reil, and others on the convex surface, which have no direct connection with either crus, central ganglia, or corpus callosum; and, lastly, that there are fibres connecting different parts of the cortical gray substance. His theory in regard to the functional activity of these parts is based on that suggested by Dr. Bastian, and may thus be shortly given: Ideas or thoughts—the act of thinking—are the function of the highest centres, occupying those parts of the cerebral hemispheres which are thus withdrawn from the outer world. When such thoughts or ideas are required to be translated into language, impulses are transmitted through communicating medullary fibres to the third left frontal convolution, where they are formulated into speech, the words being selected that are adapted for the expression of the idea or phrase. But for the articulation of any given word many muscular groups must be called into play—as those of the chest, larynx, tongue, and lips. The co-ordination of muscles for this purpose is effected by the corpus striatum, in which certain groups of cells representing certain sounds or words exist. The business of the third left frontal convolution is to call into play the right cell-groups in the corpus striatum, which shall transmit to the nerve-nuclei in the medulla and cord the impulses requisite for the utterance of the words that it has itself selected as most appropriate for the expression of the idea existing in the supreme centres.

It is obvious that this theory enables an explanation to be given of many pathological phenomena. Dr. Broadbent, following Dr. Bastian, holds that there may be either paralysis or merely a want of co-ordinating power in each of these centres. In the case of the supreme centres, for instance, the lesion may be so serious as to lead to utter loss of the memory of ideas and of words as intellectual symbols, and the patient is then said to be amnesic; or there may be only a want of co-ordinating power,—a failure in the capability of selecting the words or phrases required to express a given idea. But the supreme centres may be undisturbed and free from disease, as shown by the retention of memory and the power of expressing ideas by some other mode, as by writing, and yet there may be loss or impairment of speech. In such case the third left frontal convolution is diseased. And here, again, the lesion may be so severe as to abolish its function of selecting words or phrases appropriate to the idea desired to be expressed, and thus produce aphasia; or its co-ordinating powers may alone be affected, and the impulses it sends down to the corpus striatum may be directed through wrong channels, exciting wrong cell-groups, and giving rise to the use of inappropriate words. In cases where the corpus striatum or the motor ganglia in the medulla are affected, aphasia is not present, but there is impairment of articulation; and thus in these several instances we obtain a key to what otherwise are very puzzling groups of symptoms. We have not space to do more than refer to Dr. Broadbent's suggestion of the storing up of force in certain cells, but cordially recommend the whole paper to our readers for perusal.

A TEST FOR SUGAR.—Professor Seegen says (*Wiener Medizinische Presse*, February 25, 1872) that very small quantities of sugar may be detected in saccharine urine, if the latter be first filtered through animal charcoal. This retains the uric acid, which reduces the oxide of copper, and certain other of the constituents of the urine, which interfere with the reaction in Trommer's test. The reaction will be obtained even more distinctly if, after the urine is filtered, the charcoal be washed and the wash-water be tested for sugar.

PHILADELPHIA MEDICAL TIMES.

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EDITORIAL.

THE REPORT OF THE MUNICIPAL HOSPITAL.

THE report of Dr. Welch, the physician in charge of the Municipal Hospital, for the year 1871, has just been published. It contains many facts of interest, some of which we propose to lay before our readers. It will be remembered that until the month of August there had been no reason to believe that smallpox was about to become epidemic in this city. At that time, however, a very considerable increase in the number of cases of the disease reported to the Board of Health was observed. During the following months a still more rapid increase was noted, until about the beginning of the year, when the epidemic attained its height. Since then there has been a gradual diminution of the number of cases and a decline in the severity of the disease; and we have reasonable grounds for hope that we shall soon be able to announce the final disappearance of the scourge.

Dr. Welch regrets the necessity for making his report while the epidemic is still prevailing, and before he has had time to revise and to analyze all the notes in his possession. Unquestionably, if more time had been given to him, he could have prepared a still more valuable report,—and we see no reason why this should not be done later; but there are facts enough of interest in his paper to warrant its publication at the present time, and we feel sure that had it appeared earlier it might have been the means of saving many lives, for it contains conclusive evidence to every candid mind of the protective power of vaccination and of revaccination.

The whole number of smallpox patients under treatment during the year 1871 at the Municipal Hospital was 1227, and of this number 361, or 29.42 per cent., died,—a very large mortality, and one which shows that not only is the epidemic a malignant one, but, as it exceeded the general mortality in the city, that the cases sent to the hospital were of unusual severity. We find, as we should expect, that the percentage of deaths among the unvaccinated is exceedingly large. Thus, of 390 such patients, 254, or 65.12 per cent., perished; while the mortality among the vaccinated was only 16 per cent., and, if we take only those who had a well-marked cicatrix of the vaccine disease, only 9.93 per

cent. Twelve infants under the age of one year were admitted, and of these, ten, or 83.33 per cent., died. The cause of this great mortality is, however, not wholly attributable to the age; for we find that seven of these twelve had never been vaccinated, and that three of the remaining five had been vaccinated within a week of the appearance of the eruption, and after exposure to the contagion. Of the other two, one had been vaccinated seven days before the appearance of the eruption, and after exposure to the contagion of smallpox, and the other eight days before its appearance. It will be seen from this that no child under a year old has been admitted into the hospital in whom the vaccine disease had fully run its course and who may therefore be fairly supposed to have been under its protecting influence; and we doubt whether a single such case has been under treatment in the city. Is any stronger argument than this needed to convince the opponents of vaccination of its protective power, or to induce our State Legislature to enact such laws as will remove children from the control, in this respect, of those who blindly and stupidly oppose themselves to the results of experience? We have pointed out in a former editorial that, where proper care is exercised in the selection of virus, the danger that vaccination may be the means of transmitting other constitutional diseases is infinitesimally small, and, in view of the fact that there are few authentic cases of this kind on record, is not worthy to be weighed against the benefits which the operation confers.

The report confirms the general impression that the protection afforded by vaccination is inversely as the length of time which has elapsed since the operation was performed, and bears most overwhelming testimony in favor of revaccination. Only fourteen out of the 1227 patients admitted to the hospital had been revaccinated, and in five only of these had the operation been performed a short time before the occurrence of the disease, and in only two before exposure.

Fourteen of the patients claimed to have had either smallpox or varioloid at a prior period of life; and many of these presented the cicatrices left by former attacks of the disease. This is, of course, simply conformable to the general experience of physicians,—that one attack of variola does not always protect against a second, and that the protection afforded by it is not comparable to that afforded by recent vaccination. This is a point which it is important to bring to the notice of the community,—for we are aware that much misapprehension prevails, even among intelligent people, concerning it.

The experience of Dr. Welch in regard to the influence which variola exercises upon pregnancy agrees with that of most physicians who have had frequent opportunities for observing the disease. He says, "We may safely conclude that, when smallpox is complicated with pregnancy, the danger from the disease is increased; that abortion is liable to occur; and that, when it occurs in the early stage of the disease, peril to life is imminent." The women who aborted during the stage of desquamation, however, all recovered; and

those who were delivered at term in the hospital also did well.

There are some useful lessons to be learned from this report. For instance, Dr. Welch says, "In our tables we have found the percentage of deaths among our post-vaccinal cases to be 16 per cent. Let us suppose, then, that the three hundred and ninety unvaccinated cases had been vaccinated in infancy: instead of having two hundred and fifty-four deaths, they would have been reduced to sixty-two,—a saving of one hundred and ninety-two lives by vaccination. Again, let us suppose that all who were admitted during the year had been thoroughly vaccinated in infancy, and good cicatrices had been secured: instead, then, of having three hundred and eighty-two deaths, as appear in the table, we would have had only one hundred and eighteen,—a saving of two hundred and sixty-four lives." Applying the same reasoning to the cases that occurred in the city, Dr. Welch finds that, had all our citizens been protected by vaccination, there would have been only 370 deaths instead of 1879, or a saving of 1509 lives to the community,—a large number to fall victims to this most preventible of all contagious diseases, either as self-made martyrs, or through the self-sufficiency of their friends.

There are other arguments in favor of vaccination which are not alluded to in Dr. Welch's report, and yet we think that they appropriately find a place here. We will assume that it is conceded by all that no class in the community is more constantly exposed to the contagion of smallpox than physicians; and yet we venture to say that cases of the disease have been rare among them, and that deaths from it have been still more infrequent. This immunity is due, of course, to the fact that every physician has been careful to protect himself by vaccination and by revaccination. Physicians have in times past, during epidemics of other diseases, paid with their lives for the devotion they have manifested towards their patients; and yet, while during the whole winter they have freely exposed themselves to one of the most virulent of all contagions, they have almost escaped unscathed. They have sought to extend the same protection to their patients, but they have too often been foiled by the "intelligent objections" which have been advanced against vaccination; and the result has been the frightful mortality which has taken place during the last few months.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY, MARCH 14, 1872.

THE PRESIDENT, DR. J. H. HUTCHINSON, in the chair.

DR. J. M. BARTON presented specimens of *cancer of the pancreas and of the pylorus; calcareous deposit in pulmonary, aortic, and mitral valves*; and read the following history:

Mrs. A. W., 74 years of age, was in good health until last

June, when she had an attack of vomiting, produced apparently by acute indigestion, and which readily yielded to treatment.

She remained well until the early part of February, when she again suffered from an attack apparently similar, and which also yielded in a few days. I noticed at this time great irregularity of the pulse, both in force and frequency, but found nothing in the cardiac sounds to account for this condition.

On the 12th I was sent for in consequence of a recurrence of the vomiting, and found a tumor, about the size of a walnut, two inches to the left of the umbilicus,—sharply defined but irregular in outline, tender on pressure, immovable, and dull on percussion. It was occasionally the seat of a sharp pain. The liver was enlarged and lower than natural, but still quite distant from the tumor. The splenic dulness was quite limited, and in its natural position.

From the 14th to the 28th the patient was in a very depressed condition, but was able to take large quantities of stimulants and of liquid nourishment. The bowels were regular, but the urine was deficient and high-colored. On the 19th some oedema of the limbs was noticed; the urine was examined, and some albumen was found. There was no pleural and no peritoneal effusion. The tumor had gradually increased in size to about double that before noted, but its outline was less sharply defined. There was no jaundice.

On the 28th vomiting returned, and was never entirely controlled. It took place immediately on the administration of food or stimulants, and only then. When food was administered in teaspoonful-doses it was retained until the quantity reached about $\frac{1}{3}$ i, when it was rejected.

Autopsy.—March 13; twenty-four hours after death. The liver was found cirrhotic and displaced; the gall-bladder distended. The stomach was healthy, except the pyloric extremity. The pyloric orifice is nearly closed by a small hard tumor, so that a probe passes through it with difficulty.

The tumor in the umbilical region was found to be the pancreas, displaced, and the seat of a growth of scirrhus consistence. Nearly the whole of the organ is involved, only a small portion of the splenic extremity being free. It had contracted strong adhesions to the surrounding structures, and was removed with difficulty. The growth in the stomach was quite separate from that of the pancreas; there were not even adhesions between them.

The lungs were healthy; there was some pleural effusion. The heart was large and flabby, the muscular structure being rather pale. The semilunar valves both of the aorta and of the pulmonary artery were the seat of calcareous deposits, as well as the mitral valves.

The specimens were referred to the Committee on Morbid Growths, who reported as follows:

"Your committee believe the specimen presented by Dr. Barton to be a scirrhus cancer of the pylorus, presenting the usual microscopic characters. They failed, however, to find any trace of the disease in the pancreas."

DR. PACKARD exhibited specimens of *cancer of the liver and peritoneum*, with the following history:

Mr. M., æt. 66, of robust frame and excellent habits, was operated on by me on February 8 for hemorrhoids, from which he had suffered for thirty years. His symptoms—debility, flatulence, and intestinal irritation—were all seemingly referable to this cause; they were much relieved by the removal of the tumors, which was accomplished with the *écraseur*,—one small internal one being tied. Still, he failed to gain strength, and, without any local symptom except epigastric tenderness, he finally sank on the 13th of March.

Autopsy twenty-three hours after death; Dr. C. B. Nancrede assisting.—The lungs and heart presented no abnormal appearances. On opening the abdomen, a profusion of soft and vascular cancerous deposits were observed in the omentum, suspensory ligament of the liver, mesentery, and parietal peritoneum. The intestines and stomach were singularly clean and healthy, except at one or two points on the outer surface of the latter, where button-like masses were seen. In the pelvis the adventitious deposit was enormous, forming a thick lining to the cavity, resembling a heavy growth of moss. Into this the rectum dipped, its clean shining serous surface curiously contrasting with the soft, vascular, irregularly-nodulated morbid growth. On the mesentery the deposit was in

innumerable little masses, varying from the minutest dot discernible with the naked eye to the size of a pea, and of all imaginable shapes. Everywhere, however, the button-like character was observable.

In the substance of the liver, which was markedly fatty, there were a large number of cheesy deposits.

The kidneys were much atrophied, pale, and fatty.

The specimens were referred to the Committee on Morbid Growths, who furnished the following report:

"The portion of liver presented by Dr. Packard exhibited a yellowish-white mass umbilicated at its centre, which, on microscopic examination, revealed the well-known structure of cancer. The cauliflower-like growth of the peritoneum was so fragile that it could scarcely be handled without tearing. Microscopic examination showed it to consist of numerous thin-walled blood-vessels and an exceedingly delicate connecting-tissue stroma,—the interspaces being covered with large epithelioid cells with well-marked ovoid nuclei."

Dr. S. W. Gross exhibited a rare specimen of *sarcoma of the tongue*,—which must have either been congenital, or appeared soon after birth,—removed from a delicate female child seven months old. The tumor, which was first noticed about five weeks previously on account of the impediment which it offered to sucking and even deglutition, occupied the back part of the tongue, from which, in its progress, it gradually extended forwards over its middle. It was of a firm, dense consistence, apparently free from pain, situated immediately beneath the mucous membrane, which retained its normal appearance, except that it presented a few large straggling veins over the most prominent portion of the tumor. The growth of the neoplasm had latterly been so rapid as to cause serious respiratory difficulty. After removal, which was effected by Professor Gross without hemorrhage, by evulsion with the index-finger, it was found to be smooth, elastic, ovoidal, bilobed, of the volume of an almond with its hull, interspersed with a few calcareous concretions, and composed, as determined by Dr. Bertolet and himself, of large oval and spindle cells, the latter of which had a fasciculated arrangement.

Examples of sarcoma of the tongue are very uncommon, the only recorded cases Dr. Gross has met with being that of a congenital cystic-sarcoma reported by Dr. Jacobi, of New York, and one alluded to by Sir James Paget in his Lectures on Surgical Pathology, under the head of fibro-cellular tumors. In the latter instance the growth had existed for three years on the substance of the tongue, near its apex, in a young man.

Dr. JOHN ASHHURST, JR., presented a specimen of *primary cancer of the walls of the bladder*. (See current number of this journal.)

The specimens were referred to the Committee on Morbid Growths, who reported as follows:

"The specimen presented by Dr. Ashhurst seems to have been a cancer of the bladder, which had caused a tolerably uniform thickening of the walls of that viscus with marked diminution of its cavity, without at any point breaking through the mucous membrane. The ureters were both patulous,—the right, however, being surrounded by the new growth, which had pushed itself into the recto-vesical cul-de-sac. Microscopically it had the characteristics of a fibrous carcinoma, densely-matted fibrillae of connective tissue, with spindle-shaped cells, and small and unfrequent alveoli containing free cellular elements.

"The nodules in the lungs were evidently embolic infarcta, presenting their usual triangular shape (end towards the pleural surface). Some of the smaller patches had softened and formed abscesses; but the harder ones, in addition to the usual elements of lung-tissue, presented only compound granular corpuscles and young rounded cellular elements.

"It is a matter of regret that the veins of the pelvis were not carefully examined, since the nature of the lung-lesions would lead us to suspect that the new growth had eroded the walls of some large vein, and, projecting into its lumen, afforded an opportunity for the coagulation of portions of fibrin, which, by their subsequent detachment, had caused the embolism above described."

Dr. JAMES TYSON presented, for Dr. HALE, a specimen of *aneurism of the aorta and enormous hypertrophy of the heart*, removed from T. R., æt. 42; white; male; married; intemperate; a seaman. Born in New York. Admitted to medical

wards of Philadelphia Hospital February 24, 1872. He has no recollection of any illness in childhood. Fifteen years ago he had a very severe attack of acute articular rheumatism, from which he apparently recovered. Three years following the rheumatic attack he vomited and passed blood from the bowels, experiencing no pain. He has had four similar attacks since, at irregular intervals. The last attack occurred two months ago, since which time he has been short of breath, unable to exert himself, and could not rest well at night. During the last three weeks he has had little sleep, and has experienced a "tickling cutting pain" across the abdomen, coming in starts; also fluttering sensations about the præcordial region. His feet commenced to swell one week prior to admission.

His condition when first seen was that of a man in extreme distress: sitting up in the bed with an anxious expression, his lips were somewhat dusky; his hands purplish, and the veins of his forearms distended; his tongue was smooth, and mottled with red patches; pulse regular, of moderate force, 96 to the minute; breathing laborious; drowsy (he had not slept for ten days); chest large, fully developed; œdema of lower extremities and of genitals, but apparently no effusion into the abdomen. The patient complains of a "tickling pain" in the epigastrium. Stools infrequent; urine normal in quantity. Respiration was decidedly roughened, with prolonged bronchial expiration at base of right lung, where there was also slight dullness on percussion.

The left side of the chest was markedly prominent anteriorly, where there was also decidedly more movement. Above the clavicle on each side, pulsation of the carotid arteries was very marked; there was slight distention of the superficial veins in the same regions.

In the præcordial region the cardiac impulse was distinctly visible from the sternum to beyond the nipple. There was dullness on percussion from the third rib downward and from beyond the right edge of the sternum to beyond the left nipple. There was no impulse visible in the epigastrium. On the right edge of the sternum, at the level of the third rib, a loud but not rough double murmur was heard. A single systolic murmur was heard in the subclavian and carotid arteries of either side. The double aortic murmur was heard to the right of the sternum as low as the fifth rib; between the fifth and sixth ribs it became single, and an inch farther down was replaced by a normal first and second sound. This last point is two inches to the right of the xiphoid cartilage. Over the body of the left ventricle a distinct murmur, systolic in time, was audible. No murmur was heard in the epigastrium or in the back.

Liver-dullness normal. Urine normal.

The patient gradually sank. Marked ascites soon developed; the lower extremities swelled to an enormous extent, and he died, in extreme dyspnoea, on the morning of March 6.

Autopsy, twenty-eight hours after death.—General œdema of lower extremities, including genitals. Some ascites. Inferior lobe of right lung partially solidified. Heart enormously enlarged; weighing, with thoracic aorta attached, 39½ ounces. There was evident thickening of the mitral valve in each cup, more particularly at their junction. Tricuspid valve natural. Semilunar valves of pulmonary artery normal, presenting, however, the peculiar perforated condition simulating the auricular ventricular valves. The semilunar valves of the aorta were thickened throughout, showing also the corpora aurantii unusually distinctly. Beyond this there is an atheromatous aorta, dilated into an aneurism, which occupies the whole ascending portion.

The kidneys were congested, but otherwise healthy. Liver weighs 5 lb. 12 oz.; its structure is firm, and exhibits a slight excess of fibrous tissue. Spleen firm, and shows an excess of connective tissue.

Dr. TYSON also presented, for Dr. H. C. WOOD, a specimen of *soft cancer of the liver*, removed from a male patient dying in the Philadelphia Hospital. The disease was probably secondary. All the abdominal viscera were more or less involved in the resulting peritonitis. The liver was thoroughly adherent to the under-surface of the diaphragm, and the left kidney was drawn out with the liver, so close and strong were the adhesions.

An interesting peculiarity of the organ was the mode of enlargement which the organ assumed. Occupying probably a third of the liver, the growth extended itself in a mound-like

manner upward and backward, encroaching thus upon the posterior part of the thoracic cavity, while the lateral vertical enlargement was not great; so that percussion would reveal less enlargement than the greatly-increased size of the organ, as determined post mortem, would demand.

Dr. JAMES H. HUTCHINSON presented a specimen of *cancer of the liver and of the stomach*, removed from the body of a patient the immediate cause of whose death, on the 7th, had been acute peritonitis.

The patient had served as a soldier during the late war, and had been twice wounded,—once in the chest and once in the abdomen,—but otherwise had enjoyed good health until about the 1st of May, when he was obliged, in consequence of failing strength, to give up his employment as machinist and to seek some lighter work. In the following September, pain, referred to the right hypochondrium and epigastrium, became a prominent and distressing symptom, and caused him to give up all work. The pain was never accompanied with vomiting; it occasionally extended to the left side, and sometimes from the spine to the sternum on both sides. His bowels were usually constipated, often obstinately so. He gradually lost flesh and strength, and eventually grew so weak that he could not walk or stand.

When admitted to the Pennsylvania Hospital, February 1, 1872, his complexion was found to be sallow. Extension of hepatic dulness upwards, and tenderness over the region of the liver, were detected. The patient, when required to stand or walk, did so with great difficulty, and while doing so he kept his back bent forward. The general sensibility of the lower extremities was unimpaired, but the muscles of the right lower extremity contracted less than those of the left when the continuous current was applied. Although the patient denied ever having had syphilis, in consequence of the presence of some cicatrices resembling those left by rupia he was directed to have ten grains of iodide of potassium three times daily, under the use of which he regained a good deal of power in his legs. The area of hepatic dulness rapidly increased, and on the 23d of February the lower edge of the liver could be felt one and a half inches below the arch of the ribs. No nodules were discovered, but, on March 5, a little to the right of the position of the gall-bladder a hard body like the distended bladder could be felt. The temperature was usually 99°. Symptoms of acute peritonitis and pleurisy supervened on the 6th, and under these the patient rapidly sank.

At the autopsy the lesions of acute pleurisy and of acute peritonitis were found. The liver weighed eight pounds. It was increased in size in every direction; its upper part was lightly adherent to under surface of diaphragm; the right lobe contained from twelve to fifteen cancerous nodules, varying in size from that of a pea to that of a duck's egg. These nodules occupied principally the upper portion of the liver. The left lobe contained numerous growths. The stomach along or near its lesser curvature was involved in the disease. The mucous membrane over the deposits was in a few places ulcerated; the cardiac orifice was narrowed, the pyloric was unaffected. The spinal cord was found to be healthy, as were the kidneys and spleen.

Dr. Hutchinson called attention to the absence of vomiting in the case, to the symptoms which seemed to indicate a spinal lesion and which were partially relieved by iodide of potassium, and to the peculiar distribution of the pain. He was inclined to attribute these symptoms to the unusual seat of the cancer of the stomach.

Dr. HUTCHINSON also presented the *ileum, showing marked enlargement of Peyer's patches and solitary glands*, removed from the body of a patient who died March 12.

He was admitted into the medical ward of the Pennsylvania Hospital March 9. It was ascertained that he had been ill eight days with fever, diarrhoea, and prostration. On admission, the patient's face was flushed, his eyes were injected; he had marked mental hebetude and frontal headache. All the symptoms of typhoid fever, except the abdominal eruption, were present. There were, in addition, evidences of slight congestion of the posterior part of left lung.

On the evening of the day of admission the stupor was more marked. The pulse was 132 and compressible; the temperature was 105°. On the 10th there was an aggravation of his symptoms. Temperature, A.M., 104½°; P.M., 104°. Pulse, A.M., 120; P.M., 120. On the 11th the temperature continued

high and pulse frequent. The patient obstinately refused to swallow, and an attempt was made to nourish him by the rectum.

Death took place on March 12.

Autopsy.—Rigor mortis well marked. The chest and abdomen only were examined. The heart was healthy. There was marked congestion of the posterior portions of both lungs. The liver, kidneys, and spleen were healthy. The mucous membrane of the ileum was injected, especially at its lower part; the solitary glands were very much enlarged, some of them being as large as an ordinary pea. Peyer's patches towards the lower part of the ileum were elevated fully an eighth of an inch above the surface of the adjacent mucous membrane; a few were ulcerated. The ileo-cæcal valve was much swollen, and there were injection and ulceration of the mucous membrane of the cæcum.

Dr. Hutchinson remarked that the lesions in this case reminded him of those which he was accustomed to see, during the late war, at the autopsies of soldiers who had contracted typhoid fever in the army. It had not happened to him to meet with such cases in private or hospital practice.

In reply to a question, he said that the case had presented the usual symptoms of typhoid fever, and that he knew of no symptoms by which it could have been distinguished from the more ordinary form of the disease.

Dr. J. E. MEARS presented specimens of *hydatid cysts of the uterus and serous cysts of the pelvic cavity*.

REVIEWS AND BOOK NOTICES.

1. A TREATISE ON HÆMOPHILIA, SOMETIMES CALLED THE HEREDITARY HEMORRHAGIC DIATHESIS. By J. WICKHAM LEGG, M.D., Casualty Physician to Saint Bartholomew's Hospital. Sm. 4to, pp. 151. London, 1872.
2. "An Account of an Hemorrhagic Disposition existing in Certain Families." By JOHN C. OTTO, M.D., of Philadelphia. *N. Y. Medical Repository*, vol. vi., 1803, p. 1.
3. "Account of a Singular Case of Hemorrhage, extracted from a Letter of the late Dr. E. H. SMITH, of New York, to BENJAMIN RUSH, M.D., New York, April 9, 1794." *Philadelphia Medical Museum*, 1805, vol. i. p. 284.
4. "Account of a Remarkable Hemorrhagic Disposition existing in Many Individuals of the Same Family." By Dr. JOHN HAY, of Reading. *New England Journal of Med. and Surg.*, 1813, vol. ii. pp. 221-225.
5. "An Account of a Family Predisposition to Hemorrhage." By Drs. WM. and SAMUEL BUEL. *Transactions Physico-Medical Soc. N. Y.*, 1817, p. 304.
6. "Observations on Hereditary Hemorrhage." By REYNELL COATES, M.D., of Philadelphia. *N. A. Med. and Surg. Jour.*, 1828, vol. vi. pp. 37-53.
7. "A Case of Hemorrhagic Tendency, with Remarks." By Dr. JAMES N. HUGHES, of Simpsonville, Kentucky. *Pennsylvania Jour. of Med.*, 1831, vol. iv. p. 518. *Report of another family*, 1832, vol. v. p. 133.

In reviewing the valuable treatise by Dr. Legg, the only special volume upon hæmophilia in the English language, it becomes a matter of some interest to examine the American literature upon this subject, and to do so requires that we should go back to the early portion of the present century, when attention was drawn to it by Drs. Rush, Otto, and a few other prominent physicians; because, as will be found by careful research, very little has been written upon it in this country for the last forty years. I have therefore associated with the title of Dr. Legg's work the titles of the most prominent of the several articles which have appeared from time to time in our journals.

Although the title "Hæmophilia" is an ancient one, and common to the French, German, and English languages, it will appear as a new name to many of our readers, who know the disease better by that of the "*family predisposition to hemorrhage*," or "*the hereditary hemorrhagic diathesis*." Dr. Legg introduces his subject by some remarks upon the origin of the name. He then defines hæmophilia as "a disease both

hereditary and congenital; usually lasting throughout the life of the patient; accompanied by a hemorrhagic diathesis, and a tendency to swelling of the joints." He says, "I have preferred to use the name *hæmophilia*, because *hemorrhagic diathesis* has too wide a meaning. It would include all diseases in which a hemorrhagic tendency is present; and it is also wanting in definition, since it does not connote the hereditary and congenital character of the disease, nor the tendency to swelling of the joints; this swelling of the joints is often a more marked feature in the disease than the bleeding. The tendency to hemorrhage is only one symptom of this constitutional disorder."

Then follow the notes of five cases of the disease, in male subjects who came under his care, aged, respectively, 12, 24, 8, 20, and 23 years, with a family record of each one, showing that in the five families there were fifteen boys affected out of twenty-two. There were no cases of it among the females of these families. The succeeding chapters are devoted to the history of the disease, its etiology, symptoms, idiosyncrasies, morbid anatomy and pathology, diagnosis and prognosis, treatment, hygiene and social relations, and literature. The whole volume bears evidence of a great amount of labor, which may be somewhat realized when it is stated that the author has traced back the disease as far as the writings of Albucasis of Cordova, in the eleventh or twelfth century, and down through various German, Belgian, Danish, Dutch, East Indian, English, French, American, Russian, Swedish and Norwegian, and Swiss works, to the present time, embracing a list of one hundred and sixty-four contributors, eight of whom belonged to the United States.

There is perhaps no disease which is more decidedly hereditary than hæmophilia, although its descent has this remarkable peculiarity, that, notwithstanding it rarely manifests itself in female children, it is much the most frequently transmitted by them, first to their male offspring, and then by their daughters to the next generation. This is the testimony of most of our American writers upon the subject, and may be said to be the almost universal experience of those who have traced the disease through several generations, as has been done by Drs. Hay, Hughes, Otto, Buel, and other observers in this country. Dr. John Hay (*op. cit.*) traced the history of a family of bleeders for about one hundred years, and remarks, "The children of bleeders (males) are never subject to this disposition, but their grandsons by their daughters." Dr. Hughes says of two distinct family groups that the females were all exempt, but invariably transmitted the disease. The Drs. Buel relate a somewhat different experience, taken from the history of the family which came under their notice. The original bleeder had four sons and two daughters; in all of the former the predisposition existed to an extreme degree from early infancy: three bled to death. One daughter did not transmit the disease to her children; the other had a son who bled to death from a slight wound, and a daughter who had four sons, all bleeders, of whom two perished by hemorrhage in early childhood. All of the female members of the family were unaffected. I have myself met with a father and son who both bled profusely upon very slight injuries. They were both robust men, and the father was the healthiest in appearance of a family of four, all in good health, with the exception of his tendency to hemorrhage. Dr. Legg remarks, page 36, "There are several cases on record where the disease has passed from father to son, but it is not the rule. . . . Transmission through the father directly to the son is not uncommonly seen, when the father's brothers are bleeders but he himself has escaped."

Grandidier, who is the chief statistical authority in hæmophilia, although sometimes in error from his deductions in regard to inheritance, etc., has collected a large number of cases of the disease, and gives the proportion of the sexes affected as one female to eleven males. "Out of ninety-eight families there was a disposition to hemorrhage in the parents, grandparents, or cousins, in fifty-two."

Dr. Legg writes, page 32, "Others have thought that the disease arises when intermarriage of near relations is allowed; and support seems to be given to this view from the apparent greater prevalence of the disease in Germany, where the marriage of cousins is so little discouraged: it is also more common among the Jews, who are obliged to intermarry."

There is no question in my mind that this disease may sometimes result from consanguinity of the parents, having met with a very distressing example of it in a family where the father and mother were first-cousins, and where the disease seemed to have been aggravated from the fact that phthisis existed upon both sides. This double influence appeared not only to induce hæmophilia, but to render the children waxy-pale and delicate, prior to any loss of blood being experienced. The father married at 32, and the mother at 20. They had three children. The first, after repeated hemorrhages from various causes, bled to death when about six years old; the second, with excessive care, was kept alive until he was eight, when he fell a victim to cerebral disease, probably tubercular. He nearly lost his life from the extraction of a tooth, the hemorrhage being controlled only by digital compression kept up for twenty-four hours. The third child presented the same excessively pallid appearance, but perished before the hæmophilia was developed. The second son had a large head, was completely blanched, and had almost constant dripping epistaxis prior to his last illness. The father died of phthisis, and the mother from an accident. She was exceedingly frail in appearance, and no doubt also tubercular by inheritance from her mother.

This delicacy of appearance, except as the result of repeated bleedings, is not common in hæmophilia. Dr. Coates (*op. cit.*) records at length the case of a medical student aged 24, who nearly bled to death in this city, from the extraction of a tooth, the hemorrhage continuing with occasional interruptions from December 22 to January 1, and speaks of him as "vigorous in form, with every appearance of health." This ten days' bleeding resisted the effects of styptics, pressure, and the actual cautery, with every appliance that could be devised by the most skilful hands. He had bled for several days from a cut finger at the age of eleven, and belonged to a family connection in Delaware county, Pennsylvania, in which there were several children who had bled to death from trifling wounds. There is now resident in this same mentioned region a family of bleeders, one of whom died recently of hemorrhage from the bowels, which has long been a source of trouble and anxiety to a medical friend of mine, from whom I hope we may at some time have a full report. Dr. Hay also remarks, "Those who are subject to this indisposition are of a florid countenance, are remarkably healthy, and extremely irascible." Dr. John C. Otto (*op. cit.*) also testifies to the same effect.

Dr. Legg believes that the disease, as it occasionally occurs in women, is of a much less marked character than it presents in men. He says, page 35, "When women who are the subjects of hæmophilia bear children, their sons appear to be neither more nor less liable to the disease than if their mothers had sprung from a bleeder family but had been themselves free from the disease."*

With regard to the pathology of hæmophilia, we find the following remarks, page 87: "It is still buried in the deepest obscurity; nor are any glimmerings of light to be discovered in the numerous theories which have been advanced as to the nature of the disease. Some writers regard hæmophilia as an anomalous form of other diseases, or as dependent upon some alteration in the blood and blood-vessels together, or as a disease of the capillaries only. . . . In hæmophilia there is an imperfect development of the whole vascular system. In many cases the heart retains an appearance similar to that of the foetus, and in parts the muscular fibres are wanting in the ventricular or auricular wall, being replaced by a membranous septum only. In others, the arteries are exceedingly thin, transparent, and unable to preserve a circular section. These appearances render it probable that there is an arrest of development, or backwardness of growth, in the heart and blood-vessels. Now, true hæmophilia is a congenital disease, and it may be that the foetal state of the vascular system persists in extra-uterine life. Newly-formed vessels are very liable to hemorrhage, spontaneous and traumatic: the new-born infant

* I have seen in this city within a few days a lady who has this disease in a mild form, whose daughter is similarly affected, but whose son is free from the malady. The daughter is grown up, but for years has been subject to frequent attacks of dripping epistaxis, which appear of late to be growing less violent and more infrequent. Both bleed to moderate excess from slight injuries, but never to the extent common in male subjects.

bleeds much more readily and for a longer time than the adult. The vessels of newly-formed granulations and of rapidly-growing tumors bleed upon very slight provocation. If the vessels in hæmophilia were permanently in the foetal or newly-developed state, frequent and long-continued bleedings might well be expected from them. And in this case it would not be surprising that not much alteration should be detected with the microscope, which has happened in two cases in which such an examination was made."

This is certainly a very plausible hypothesis, and possibly correct in many cases; but it will not do to base the cause of hæmophilia upon one anatomical condition, when it is well known that neither the disease nor the physical characteristics of its subjects are at all uniform. Some are delicate, effeminate in appearance, and almost beardless; others are directly the reverse. In some the heart is normal, in others nearly in its foetal state, and in some, again, of enormous size without apparent disease, etc. Those of delicate build and appearance seem to be the most liable to spontaneous hemorrhages and arthritic effusion and enlargement; whilst those who are florid and robust are most in danger from the effects of trifling contusions, cuts, and lacerations. Ecchymoses, and bloody areolar tumors from a slight knock or pinch, no doubt result from a tenuity of the capillary vessels; but this will not account for all the cases of excessive loss from slight incised wounds. Hæmophilia is a complex disease, and unquestionably originates in a combination of abnormal conditions, some or all of which may be present in a case, according to circumstances. It is a disease of defective organization, the origin of which must be sought for by chemical and microscopical examination of the blood, by post-mortem investigations into the condition of the heart and blood-vessels, and especially of the capillary arterioles of the part most recently affected by hemorrhage. The condition of the nerves should also be examined by the microscope. Why should a man bleed to death from a cut of his cheek two inches long and three lines deep, made by a sword in a German duel, as reported by Escherich, in Hencke's *Zeitschrift*, 1847? With our improved means of minute investigation, it would appear that the true cause of the uncontrollability of such hemorrhages should before long be determined. As lacerated wounds are more dangerous in hæmophilia than incised ones, it is evident that the various changes which arrest bleeding from the former in healthy subjects cannot take place, and we must look for the converse as regards the effect upon the arteries and blood produced by this imperfect form of torsion. If the heart's impulse upon the capillary arteries is not overcome by contraction and thrombosis, then we must have continuous hemorrhage, whether this want of action be due to defective development in the vessels, the want of proper stimulus by the nerves, imperfect coagulability of the blood, or all three combined, and perhaps assisted by an abnormal contractile power in the muscular structure of the heart. The normal elasticity of our arteries, allowing of their progressive dilatation under the heart's impulse, is a provision of safety whereby the capillaries receive their current of blood under a diminished pressure, as will readily be perceived. If, then, we should have a defect in this provision, so that the capillary pressure should be in excess, and at the same time a defective contractile power in the wounded vessels, with blood that does not readily coagulate, we can easily account for the difficulties of arresting the hemorrhage. The valuable effects of tincture of the perchloride of iron in diminishing the disposition to spontaneous hemorrhages would appear to indicate an original blood-defect in such cases. Drs. William and Samuel Buel (*op. cit.*) remark in regard to their patients, "The blood is not destitute of coagulability; large coagula are frequently formed about the orifices of the wounds, but the *strong impetus* with which the blood flows overcomes their too feeble resistance. When by any means the hemorrhage is suppressed, the part above usually becomes livid and intensely painful, so that relief is obtained only by permitting a recurrence of the bleeding."

Dr. Legg remarks, page 77, "The examination after death of persons who have suffered from hæmophilia has hitherto thrown little light on the disease. . . . In the greater number of cases, it is stated that all the organs examined, especially the heart and vessels, were natural." What is still much wanted is a minute and thorough microscopical examination

by a committee of experts, and a comparison with exactly similar parts and tissues taken from unaffected subjects, so as to determine by micrometric calculation the development of the muscular fibres in the arteries, the calibre of these vessels, and the thickness of their walls. It would also be well to measure in the living subject the comparative force of the arterial current.

The mortality from hæmophilia presents a frightful picture, and shows why it is that this disease is prevented from becoming a much more common inheritance. Granddier, before quoted, states that of one hundred and fifty-two boys, but nineteen reached the age of twenty-one: eighty-one of them died during the first seven years, and twenty before they were a year old, the most usual cause of death being hemorrhage. The great comparative exemption of the female children, and their power of transmission, is mainly the cause of the descent of the disease as it has been observed from generation to generation in some families. In determining the hereditary character of the convulsions in children as it sometimes appears, I traced the complete history of one family to every ramification through one hundred and thirty years; and it would be interesting at this date, if possible, to continue the investigations of Drs. Hay, Buel, Coates, and Hughes, and see whether the disease has disappeared or is still in continuance. My researches in regard to convulsions bring me down to the case of a girl of six, in the fourth generation, recently attacked, the disease coming through the mother, grandfather, and great-grandfather. As in this type of eclampsia, so in hæmophilia, the disease manifests itself under the most trifling impression. Death has resulted from cutting the gums, the frænum of the tongue, or even vaccination; and hemorrhages from the mucous membranes equally fatal have resulted from sneezing, blowing the nose, coughing, and sickness of stomach.

The medical treatment of hæmophilia, it will be naturally inferred, can have but little if any curative influence, as the disease, except in very rare instances, remains throughout life. Constant care may prevent in great measure the occurrence of traumatic hemorrhage, and the use of chalybeates, with proper hygienic treatment, diminish the frequency of spontaneous attacks. It was at one time thought that the sulphate of soda had a direct influence in arresting the flow of blood, and its applicability was considered a great discovery by some of the bleeder families; but more recent investigations have demonstrated that it is of comparatively little value, except as a purgative. Ergot and gallic acid, with various astringents, and opium, have all met with their advocates. If it be true with regard to any case, as claimed by some of the German authorities, that the heart beats more frequently and forcibly than normal, that the arteries have no contractile power, and that the blood is below standard in coagulability, then remedies diminishing the heart's action, such as digitalis, veratrum viride, etc., together with tincture of the perchloride of iron, and strychnia, might be employed with some advantage. It should always be borne in mind that it is rarely safe in acute disease to bleed, blister, cup, leech, or cauterize, as remedial measures, any one inclined to hæmophilia.

Dr. Legg, page 126, introduces the important social question, "Should a bleeder, or one of a bleeder family, be allowed to marry?" He takes the ground that every right-thinking person will for the sake of posterity remain single, and every one not so minded should be forced to the decision by a legal enactment. In conclusion, we have only to commend the treatise of Dr. Legg as one well worth a general perusal.

R. P. HARRIS.

ON AN IMPROVED METHOD OF PHOTOGRAPHING HISTOLOGICAL PREPARATIONS BY SUNLIGHT. By Assistant-Surgeon J. J. WOODWARD, U.S.A. Washington, D.C., 1871.

Hitherto the great obstacle in photo-micrography has been the want of some convenient and inexpensive source of illumination. In previous reports Surgeon Woodward has demonstrated the satisfactory results that can be obtained by the employment of artificial sources of illumination, such as the electric, oxy-calcium, and magnesium lights. The great trouble and expense incident to the use of any of these sources of illumination have thus far deterred most histologists from employing this unrivalled method of illustrating their works.

This report, with its accompanying nine plates, representing the microscopical appearances of sections of striated muscular fibres, ovary, lung, liver, etc., makes a very favorable impression of the excellent manner in which the histological work has been performed, and of what may be accomplished by the use of sunlight itself in photo-micrography. No one examining these pictures can fail to appreciate the promising value of this branch of photography as a means of bringing into a tangible form before the profession the results of original histological and pathological observations. We agree fully with the author when in his concluding remarks he predicts that "if photographic representation was universally demanded, a higher class of preparations than those which now satisfy too many microscopists would become indispensable, and the vague description, based on clumsy or imperfect preparations, which too often disfigures microscopic literature, would be replaced by a more accurate representation of the actual facts."

That photo-micrography will soon be found to be an indispensable accomplishment of every successful microscopist, seems all the more probable, now that we have given to us this simple and economical method, yielding pictures at least equal, if not superior, to those produced by any other known process. In this improved method of photo-micrography, "with the exception of the mounting of an ordinary solar mirror, no special apparatus is absolutely needed for this purpose which may not be made by the microscopist himself, or at least produced at a very trifling cost. Nothing more than a knowledge of the principles of photography is required. In every case the services of a good dark-room man should be procured, and if the preparations are carefully selected beforehand, and the highest wages paid to the best operator attainable, the average cost of the negatives will be far less than that of the cheapest and most indifferent drawings. Accuracy of representation in these objects can only be satisfied by photography, and photography is not only the most accurate, but the cheapest and least troublesome method of reproducing microscopic objects."

This successful method of taking photo-micrographs by sunlight without the use of the expensive heliostat is for the first time given to the public, and for its discovery and perfection we are indebted to Surgeon Woodward.

We regret that our limited space precludes as minute a description as desirable of this process. We shall therefore content ourselves with a succinct account of a few of its more important features; recommending a careful perusal of this excellent monograph to all who contemplate studying this interesting branch of photography.

A large condensing-lens is fitted into the outer extremity of a brass tube six or eight inches long and two inches in diameter. Just below this tube an arm is firmly attached to the outer surface of a disk encircling the tube for the purpose of carrying the mirror or right-angled prism, to which any desired inclination can be given by a rod passing through the disk by the side of the tube. The whole arrangement is quite like the similar parts of the ordinary solar microscope, and hence needs no further description; it is fitted into a window-shutter, which must of course face to the south, and, the room being darkened, the motions of the mirror or prism can readily be controlled from within. The achromatic condenser, illuminated by a parallel pencil obtained from the prism, answers better for certain objects, such as the pleurosigmata and some other diatoms, for which the condensing-lens is unnecessary; and, if properly managed, no diffraction or interference phenomena are produced. For all perforations of the soft tissues which require the large condensing-lens to avoid diffraction and interference, a common glass mirror will answer well enough. By this plan the exposure is greatly diminished,—from three minutes for five hundred diameters, to a fraction of a second,—and the resulting pictures are not only quite free from diffraction and interference phenomena, but are characterized by great contrast and superior sharpness of definition.

It is a matter of some difficulty to regulate with precision the exposure when the time required is but a fraction of a second. To facilitate this matter, the author has very ingeniously arranged "a sliding shutter, with a transverse slit of variable width, so adjusted as to fall with its own weight before the tube of the microscope; the exposure being made

during the passage, and the time of exposure regulated by the width given to the slit."

Preference is given to immersion-objectives of even as low a power as one-eighth of an inch, the corrections of these objectives being generally well suited to photographic requirements.

It has also been found best to use the naked objective without eye-piece or amplifier, and not, as a rule, to fix the sensitive plate more than three or four feet from the stage of the microscope. Suitable amplifiers, or even eye-pieces, may be used in either high or low powers with great increase of the magnifying power, and often with admirable scenic effect, but there is always a certain loss of definition. In the management of the plate-holder, the apparatus for focussing, and other accessory arrangements, the same simple plan is followed for solar light as described in full in Woodward's previous reports on the use of artificial lights in photo-micrography.

BOOKS AND PAMPHLETS RECEIVED.

On Organic Physics. By Henry Hartshorne, M.D. Read before the American Philosophical Society, January 19, 1872.

The Mysterious Death of Margaret Campbell critically examined; with a Review of the Testimony, Verdict of the Jury, Comments of the Press, etc. By T. D. Crothers, M.D., Member of the Albany County Medical Society. Pamphlet.

Report of the Municipal Hospital (comprising Statistics of 1227 Cases of Smallpox). By William M. Welch, M.D., Physician in Charge. From the Annual Report of the Board of Health of the City of Philadelphia for the Year 1871.

GLEANINGS FROM OUR EXCHANGES.

THE TEETH AND MOUTH IN IDIOTS.—In a previous number we gave an abstract of the observations of Dr. Langdon Down in reference to certain characteristics of the mouth and teeth of congenital idiots. Dr. J. W. White, editor of the *Dental Cosmos*, has been making some observations in the same direction, and thus records in that journal the result:

"The views expressed by Dr. Down, so far as they related to the narrow arch and vaulted palate as associated with mental defect of congenital origin, are in exact accordance with opinions which the writer had long entertained and frequently expressed,—opinions originating, probably, from observations of the mouths of a family most of whose members were considered as lacking in mental power; one of whom—the most markedly deficient—presenting in extreme the peculiar mouth under consideration, which characterized to a greater or less extent the entire family.

"To investigate the facts, more especially in reference to the other deviations from normal conditions, we recently sought and obtained, from the gentlemanly superintendent (Dr. J. N. Kerlin) of the 'Pennsylvania Training School for Feeble-minded Children,' an invitation to spend a day at that institution. In company with an esteemed dental friend, who took a deep interest in the problems presented, but who had formed the opinion that the characteristic mouth of idiots was abnormally flat and broad, we devoted the day to an examination of the dental and other peculiarities of the inmates, numbering about one hundred and eighty.

"The first three cases which presented were, by a singular coincidence, so strongly confirmative of Dr. Down's position in reference to the narrow and deep arch, that there was corresponding assurance on the part of one of the examiners, and distrust on the part of the other, as to the correctness of previously-formed opinions. The next case was the exact reverse, a broad, flat mouth; the evidence being strongly in favor of the congenital origin of the mental defect, which was decidedly pronounced. To these succeeded a series of cases which were absolutely free from any noteworthy peculiarity of the oral cavity. Among the balance we found three more marked cases of narrow and vaulting arches; but many where the deviation, if any, from normal condition was in the direction of breadth and flatness rather than the reverse.

There were two cases of V-shaped upper maxillary; two of disproportionate size of lower jaw; several of *unusually* broad and flat arches; one case of hanging and one of cleft palate; and several cases of incomplete dentition,—a missing lateral or canine. We could not determine any special deviation as to time or sequence in dentition, and were forced to the conclusion that, considering the inattention to their teeth, as to everything else connected with the care of their persons, the teeth stood the test of neglect remarkably well.

"In the mouths of some of the inmates—especially those whose mental development was little above zero—there were teeth which, for size, regularity, density, and perfection of form, would answer as models. There were also teeth which were faulty in every respect and relation; but, on the whole, we had to admit they were about an average lot,—neither better nor worse than those of the same number of similarly-neglected people of ordinary intelligence.

"There is one fact apparent to the most superficial observer,—the rapidity with which these poor creatures grow physiologically old. The evidences of senility are noticeable in every organ and function: in premature baldness and gray hair; in dulness of hearing and dimness of vision; in the wrinkled skin; the tottering step; the wasted limbs; the receding gums, and absorbed alveolus. So that, in several cases, the man of thirty, by the record, seemed to be on the other side of sixty. Even in these cases, the teeth which were ready to drop from their sockets were not unfrequently sound in their structure.

"Subsequent examination of the mouths of a number, believed to be congenital idiots, has resulted in finding three more cases of the high and narrow palatal arch; but these were counterbalanced by other cases where the development was exactly the opposite, and by others where there was no discoverable abnormality; while several marked instances of the mouth described by Dr. Down have been found associated with intelligence of a decided character; one instance, in particular, of excessive height and extreme narrowness,—more marked than any we found among the feeble-minded,—in the case of a very intelligent and successful professional man.

"Notwithstanding these apparent contradictions, it seems reasonable that there is a correlation between physical and mental organizations; and the deductions of one who has had such ample opportunities and so extensive an experience as Dr. Down are not to be set aside by the observations of a day, even if no solution of the problem presented; but it is presumable that the class of imbeciles which came under Dr. Down's inspection differs, as a rule, from the majority of those who are to be found here, in such an institution as the one mentioned.

"We suggest as a reasonable explanation the probability that the cases of which our opportunities allowed an examination were chiefly the result of accidental, individual causes, occurring during gestation, or inhering only in the immediate progenitor,—perhaps in an exceptional condition at the time of impregnation or conception, such as the perversion of function produced by inebriation or other perturbing influences; while Dr. Down's cases were probably examples of continuous enervating and degenerating influences of intermarriage and other depressing causes connected with the life of the aristocracy. These causes, being cumulative through successive generations, would doubtless produce a different style of abnormality from that which is the result of individual and accidental causes. That a law of correlation between progressive mental and physical development or deterioration exists, there can be no doubt, nor that it can be traced, if we 'observingly distil it out;' but problems like these are not definitively settled except by the concurrent testimony of various observers."

ALCOHOLIC PARAPLEGIA.—Dr. Samuel Wilks, in a communication to the *Lancet*, March 9, 1872, calls attention to a lecture on this subject which was delivered by him in October, 1867. In the course of the lecture he says that he has seen many persons, especially ladies, who have entirely given themselves up to the pleasures of brandy-drinking, and have consequently been rendered paraplegic. A loss of power is first observed, accompanied by pains in the limbs, which

might indicate a chronic meningitis of the spinal cord, and in some cases there is anæsthesia. There is at the same time some amount of feebleness of other parts of the body, as well as of the mind, and thus an approach to general paralysis is produced; but sometimes the symptoms are almost confined to the legs, and resemble in character those of locomotor ataxy. In regard to the treatment, this is hopeful. He recommends the iodide or bromide of potassium before commencing galvanism or a tonic course, but insists strenuously upon the removal of the primary cause of the complaint, and says that there is no reason to fear that either an attack of delirium tremens or death will be induced by the complete withdrawal of alcohol when the system is being poisoned by it. "I have seen persons," he says, "more especially ladies, lying on their beds surrounded by friends waiting for their last moments, where scarcely a mouthful of food had been taken for months, where the prostration, increased by urgent sickness, was extreme, and where they were constantly plied with brandy to keep them alive a little longer; and yet, in such cases, where the diagnosis was clear, from the blood of the patient being overcharged with poisonous elements, and the room stinking with the fetid vapors of the body, I have recommended a withdrawal of every drop of the so-called 'stimulus,' and with effects more marvellous than any one who has not adopted the plan can conceive."

SCLEROSIS UTERI.—Prof. Alexander J. C. Skene, in the course of a clinical lecture (*The Medical Record*, March 1, 1872), thus sums up the leading points in the diagnosis of this affection:

1. A clinical history indicating that the patient has previously had puerperal metritis, followed by an impaired state of health.
2. Constitutional symptoms such as occur in chronic forms of uterine disease.
3. Derangement of function: usually irregular, scanty, and painful menstruation. The pain continues, as a rule, through the whole period of menstruation, and may be likened to an exaggeration of the ill feelings of an ordinary menstruation. By these peculiarities it may be distinguished from the dysmenorrhœa caused by flexion of the uterus. In this latter affection the pain is that of intense uterine colic, and is usually limited to the beginning of menstruation, decreasing or disappearing when the flow begins.
4. Enlargement and induration of the uterine walls.
5. Increased length of the uterine cavity, without increase of the lateral and antero-posterior diameters.
6. Anæmia of the uterus, indicated by the amenorrhœa, and the pale appearance of the cervix.
7. Absence of cervical disease, such as occurs in hyperæmic and inflammatory affections.
8. The slight retraction of the lips of the os, and the small diameter of the cervical canal in proportion to the increased size of the cervix.

THE TREATMENT OF CROUP.—Dr. Daguillon recommends (*Gazette Hebdomadaire*, 1871) the following treatment when symptoms of suffocation from croup are imminent: A sponge, after being dipped in pure liquor ammoniæ, is to be squeezed until no more liquid drops from it, and is then to be passed, by means of a whalebone probang, down the throat. The child should be compelled to inhale the vapor of ammonia as long as it possibly can. The immediate result of this treatment is an abundant secretion from the respiratory mucous membrane and the expectoration of false membrane; the dyspnoea diminishes, the cough is less hollow, and the voice is less muffled. Often, in cases where death seemed imminent, the lives of children have been saved.

RELAPSES OF SCARLET FEVER AND MEASLES.—Dr. Trojanowsky has had an opportunity for observing (*Journal für Kinderkrankheiten*, January and February; from the *Dor-pater Medic. Zeitschrift*, 1871, S. 297-300) several cases in which relapses of the acute exanthemata took place. From observations made in these cases, he believes that the recurrence of the eruption ought not to be looked upon as a true relapse, but rather as a complement of the first attack. He has found that whenever the manifestations of any one of these diseases were incomplete in the first attack, the symptoms which were least marked became more prominent in the second.

HYDATID OF THE ORBIT.—Dr. Steiner reports, in the *Wiener Medizinische Presse*, February 18, 1872, a case of this kind occurring in a boy ten years of age. About two years before coming under Prof. Billroth's care, slight displacement upwards and inwards and prominence of the left eyeball were noticed. Some of the symptoms induced Prof. Billroth to believe that the displacement was caused by a vascular tumor; but its cystic nature was discovered as soon as an exploring-needle was introduced. It was removed by an operation. Dr. Steiner calls attention to the rare occurrence of this disease in the orbit, there being not more than a dozen such cases reported.

TREATMENT OF RETENTION OF URINE IN IMPERMEABLE STRICTURE OF THE URETHRA.—Dr. P. A. O'Connell, late Medical Director of the "Ninth Army Corps, U.S. Army" (*Lancet*, March 1, 1872), describes an expedient which he had recourse to after failing to pass a catheter, and which he has since found useful in other cases. "Having upon my office-table an india-rubber hand-syringe consisting simply of a rubber pouch or ball, with a hard rubber stem to it, that I generally used as a part of Politzer's apparatus for inflating the middle ear, it occurred to me that it might be made use of as an exhaustor,—a suction-instrument,—and that by this means, perhaps, the stream of water could be started. Acting upon this idea, I took a catheter of medium size, made a perforation in its extreme end, and passed it down to the stricture. Then, squeezing the rubber pouch so as to drive out the air, I connected it by means of a short piece of india-rubber tubing with the catheter already in the urethra, and, allowing it to expand gently,—instructing the patient at the same time to make a gentle effort, and only a gentle effort, to pass his water,—I had the satisfaction of learning that the experiment had become a success, and that the man was relieved."

THE CAUSE OF HYDROCELE.—M. Panas, in a communication on this subject to the *Archives Générales de Médecine*, reports several cases in which, after tapping for hydrocele, the epididymis was found indurated. He is consequently inclined to believe that the accumulation of serum in the sac of the tunica vaginalis is due to this induration, which in some way interferes with the return of blood from the scrotum. Hydrocele generally does not occur in individuals under forty; and since it is at that age that the alterations of the neck of the bladder and of the prostate are common, the inference is justifiable that the morbid process in some cases extends to the epididymis and to the testicle.

PURPURIC SPOTS PRODUCED BY IODIDE OF POTASSIUM AND IODIDE OF AMMONIUM, BUT NOT BY IODIDE OF SODIUM.—Dr. Sydney Ringer, in a note to *The Practitioner* for March, 1872, reports a case in which a petechial rash was caused by the administration of the first two drugs, but not by the last.

CARDIAC COMPLICATIONS OF GONORRHOEA.—M. Lacassagne reports, in the *Archives Générales*, a case in which pericarditis supervened upon an attack of gonorrhoea. There was no urethral discharge during the attack of inflammation, but it reappeared when the pericarditis was cured. Several similar cases are referred to. M. Lacassagne infers from these cases that gonorrhoea predisposes not only to inflammation of the joints, but also to that of the pericardium and endocardium.

MISCELLANY.

DEATH OF PROFESSOR DICKSON.—William Henry Dickson, M.D., Professor of the Theory and Practice of Medicine in the Jefferson Medical College of Philadelphia, died at his residence in this city on Sunday, March 31. An obituary notice of this distinguished gentleman will appear in our next number.

At a special meeting of the Faculty of Jefferson Medical College, convened in reference to the death of their late esteemed colleague, Professor Dickson, it was

"Resolved, That the members of the Faculty have heard with deep-felt sorrow of the demise of their late distinguished colleague, Samuel Henry Dickson, M.D., LL.D., Professor

of the Theory and Practice of Medicine, whose name and fame for the last fourteen years have been connected with this Institution, and for half a century with medical teaching. Ripe in years, and rich in all the honors that could be gathered from the broad fields of science and literature, he has closed a long and active life, made, by his genius and vast experience, most eminently useful in ministering to the relief of the sick, and in the education of a very large portion of the medical profession of this country. A courteous gentleman, a genial and refined associate, always amiable and instructive in his intercourse with his fellows,—wise, learned, and accomplished as a teacher,—the Faculty of this College and the profession at large may well sorrow over the extinction of a life so rich in usefulness and renown."

It was further

"Resolved, That the Faculty, in remembrance of his many virtues, and in profound respect to his memory, will pay their last tribute to a loved colleague by attendance at his funeral; and further,

"That a copy of these resolutions be transmitted to his family."

B. HOWARD RAND, M.D.,

Dean of the Faculty.

At a special meeting of the students of the Jefferson Medical College, held April 1, 1872, the death of W. H. Dickson, M.D., LL.D., Professor of the Theory and Practice of Medicine in the Jefferson Medical College, was announced, and the following resolutions were unanimously adopted:

"Resolved, That we, the students of the Jefferson Medical College, have lost a most eminent and earnest instructor, and a valued friend.

"Resolved, That, in his death, the medical profession has lost a most distinguished member,—a man intimately connected with the progress of medical science during the last fifty years. Eminently successful in his labors as a teacher, his loss will be mourned by the thousands who have listened to his able instructions.

"Resolved, That a copy of these resolutions be sent to his bereaved family, with whom we deeply sympathize; and that, in further token of our respect, we will attend his funeral in a body."

FRANK WOODBURY, Pennsylvania,

President.

FRANKLIN WEST, Pennsylvania,

Secretary.

Charles H. Fisher, California; George D. Topping, M.D., Ohio; John E. Halbert, Mississippi; Hext M. Perry, M.D., South Carolina; J. Eliason, Maryland, *Committee*.

DEATH OF PROFESSOR JACKSON.—Samuel Jackson, M.D., Emeritus Professor of the Institutes of Medicine in the University of Pennsylvania, died at his residence in this city, aged 85 years.

METEOROLOGICAL.—The mean temperature of the month of March, according to the record kept at the Pennsylvania Hospital, was 34°.25, or about five degrees below the average of means for March since 1790, which is 39°.14. The highest temperature observed during the month was 62°, on the 29th. On the 5th, the thermometer ranged between 6°—the lowest temperature observed during the month—and 20°. The month of March just past, although unusually cold, was not unprecedentedly so, for in 1843 the mean temperature during the same month was only 30°.

The quantity of rain which fell in March was 3.38 inches; the average rainfall for the month during the past thirty-five

years having been 3.9 inches. Thus far during the present year only 5.84 inches of rain have fallen, against 12.47 inches during the first three months of last year.

DELEGATES TO AMERICAN MEDICAL ASSOCIATION (as far as heard from).—*College of Physicians*, Drs. Ruschenberger, Bridges, A. Stillé, F. G. Smith, I. Ray, E. Hartshorne, Ellerslie Wallace, R. H. Townsend, T. Hewson Bache, B. H. Rand, Wm. Hunt, J. H. Packard, R. J. Dunglison, J. M. DaCosta, A. D. Hall, John Ashhurst, Jr., H. C. Wood, Jr., F. F. Maury, Samuel B. Howell, and H. Y. Evans.

Philadelphia County Medical Society, D. H. Agnew, R. Burns, A. H. Fish, A. Frické, Wm. Goodell, Saml. D. Gross, George Hamilton, N. L. Hatfield, A. G. B. Hinkle, W. L. Knight, A. Leaman, W. Maybury, J. Aitken Meigs, Andrew Nebinger, Wm. H. Pancoast, and J. G. Stetler.

Pathological Society, James H. Hutchinson, James Tyson, J. Ewing Mears, S. Lewis, John H. Brinton, William Pepper, W. W. Keen, S. W. Gross, Francis W. Lewis, Samuel Ashhurst, R. A. Cleemann, Elliott Richardson, J. Minis Hays, R. M. Townsend, Wm. G. Porter, and Wharton Sinkler.

Obstetrical Society, R. P. Harris, J. L. Ludlow, D. M. Cheston, L. D. Harlow, S. S. Stryker, and Wm. F. Jenks.

Ophthalmological Society, T. G. Morton, Wm. Thomson, E. Dyer, and Wm. F. Norris.

Medico-Chirurgical Society, A. G. Reed, S. B. W. Mitchell, and H. W. Ozias.

Northern Medical Association of Philadelphia, N. L. Hatfield, J. H. Swartz, Levi Curtis, L. P. Gerhard, and L. J. Deal.

Philadelphia Hospital, John S. Parry and Edw. L. Duer.

Orthopedic Hospital, H. Earnest Goodman.

Northern Dispensary, Charles Carter.

Medical Board of Northern Dispensary, Charles K. Mills.

Jefferson Medical College, Joseph Pancoast and Samuel D. Gross.

Philadelphia Eye and Ear Infirmary, J. W. Millick.

Children's Hospital, H. Lenox Hodge.

Howard Hospital and Infirmary for Incurables, David Burpee.

Wills Hospital, George C. Harlan.

Pennsylvania Hospital, J. Aitken Meigs and Addinell Hewson.

Episcopal Hospital, H. Norris and William S. Forbes.

AMERICAN MEDICAL ASSOCIATION.—We publish the following for the information of our subscribers:

The twenty-third annual session will be held in Horticultural Hall, Broad Street above Spruce, on Tuesday, May 7, 1872, at 11 A.M.

HOTEL ARRANGEMENTS.

Continental, Chestnut and Ninth, \$4 a day.

Girard, Chestnut and Ninth, \$3 a day.

La Pierre, Broad below Chestnut, \$3 a day.

Colonnade, Chestnut and Fifteenth, \$3 a day.

St. Cloud, Arch below Eighth, \$3 a day.

St. Elmo, Arch above Third, \$2.50 a day.

American, Chestnut below Sixth, \$2.50 a day.

Merchants', Fourth above Market, \$2.50 a day.

St. Lawrence, Chestnut below Twelfth, \$2 a day.

Alleghany, Market below Ninth, \$1.75 a day.

St. Charles, Third below Arch, lodging only, 50 cts. a day.

Miller's, Seventh and Chestnut, lodging only, \$1.50 a day.

Meals at restaurant of Horticultural Hall, and Petry's, N.W. corner Broad and Walnut, each 50 cents.

318 South Broad, \$2 a day, or \$10 a week.

N.E. corner Broad and Spruce, \$1.50 a day, or \$10 a week.

329 South Broad, \$2 a day, or \$10 a week.

1327 Spruce, \$2 a day, or \$12 a week.

225 South Broad, \$2.50 a day, or \$12 a week.

RAILROADS.

Union Pacific, return free, if first-class tickets are bought and an acknowledgment taken from the agent.

Cumberland Valley, excursion tickets.

Orange, Alexandria and Manassas, half-fare for return.

Pittsburg, Cincinnati and St. Louis, excursion tickets.

Pittsburg, Fort Wayne and Chicago, excursion tickets.

Cleveland and Pittsburg, excursion tickets.

Central Railroad of Georgia, return free.

Richmond and Petersburg, return free.

Wilmington and Weldon, excursion tickets one fare.

Wilmington, Columbia and Augusta, excursion tickets one fare.

Kansas Pacific, one and one-fifth fare for excursion.

Atlanta and New Orleans Short Line (A. and W. Pt. Western, Mobile, and M. N. O., M. and Texas Railroads), return free.

Western and Atlantic, excursion tickets one fare.

Western Alabama, excursion tickets one fare.

Evansville and Crawfordsville, excursion tickets.

Lehigh Valley, excursion tickets one fare.

Louisville and Nashville, excursion tickets.

Memphis and Louisville, excursion tickets.

North Pennsylvania, excursion tickets two-thirds fare.

Pennsylvania Central, excursion tickets.

Philadelphia and Erie, excursion tickets.

Philadelphia, Wilmington and Baltimore, excursion tickets.

Philadelphia and Reading, excursion tickets at two-thirds.

Baltimore and Ohio, excursion tickets.

Lake Shore and Michigan Southern, excursion tickets if forty are taken.

All who desire to avail themselves of the above rates must send to the Secretary their full names, and the names of *all* the railroads over which they must travel in coming to the session, with stamp for postage.

WM. B. ATKINSON, *Permanent Secretary*,
1400 Pine Street, Philadelphia.

SPECIAL.

Camden and Amboy, excursion tickets at \$4 from New York to Philadelphia and return, if fifty tickets are taken. For this ticket, send money to Dr. A. E. M. Purdy, 123 East Thirty-eighth Street, New York.

From Montgomery, Ala., to Philadelphia, and return (by Tennessee), \$39.80. Apply through Dr. R. F. Michel, Montgomery, Ala.

From Washington to Philadelphia and return, \$6, if fifty tickets are taken.

Central Pacific, half local rates.

APPOINTMENT.—Dr. James Tyson has been elected Attending Physician to the Philadelphia Hospital, *vice* Dr. Alfred Stillé, resigned.

THE FIRST MEDICAL JOURNALIST.—The *Medical and Surgical Reporter* of March 23, in an editorial with this heading, assigns the honor of being the first medical journalist to Dr. Nicolas de Blegny, who edited the *Zodiacus Medicorum*.

Gallicus from 1680, when it was started, until 1684. Born in a humble station in life, Dr. de Blegny does not seem to have had the advantages of a learned education; he, however, was possessed of unusual energy, and at the early age of twenty-five was appointed Surgeon to the Queen. Five years afterwards he became Surgeon-in-Ordinary to the Duke of Orleans, and, four years later,—1687,—Physician to the King, Louis XIV. During these years he was busily engaged in writing and lecturing on various medical topics. None of his works, it is said, indicate much ability; but they are known only through the criticisms of his enemies. The comments of the journal upon some medical books embittered their authors, who succeeded in procuring its prohibition in 1684. It was then transferred to a Dr. Niort, a French physician practising in Amsterdam, who determined to render it less medical and more literary. With this object he named it *Le Mercure Galant*.

The enemies of De Blegny were not satisfied with causing the suppression of his journal, but continued their persecutions until they procured his imprisonment in the castle of Antwerp, where he remained seven years. He spent the rest of his days at Avignon, dying in 1722, at the age of seventy.

THE PATHOLOGY OF PAINTING.—Mr. Liebreich proposes (*British Medical Journal*, March 9, 1872) to give a lecture at the Royal Institution as to the effects of certain faults of vision, with special reference to Turner and Mulready. Himself an accomplished artist, this great ophthalmologist has, in studying the various periods of Turner's style, arrived at the conclusion that the later aberrations which some connoisseurs have affected to admire were demonstrably the result of a physical change in the refraction of the eye, by which illuminated points were converted abnormally into illuminated lines. Tracing the advance of the disease by the increasing eccentricities of pictorial effect, he has been able repeatedly and with accuracy to date precisely the pictures and sketches of the later period by this means of purely optical and, so to speak, medical diagnosis; and, by producing a similarly aberrant dispersion of light, he will be able to demonstrate before the eyes of the spectators the conversion of pictures of the earlier into those of the later style of the great artist. In the case of Mulready, Mr. Liebreich has determined that the so-called change in manner which marks his later pictures, and which are characterized by an excessive prevalence of purple tints, was due to increasing yellow degeneration of the crystalline lens of the painter's eye; and that by the use of a corrective yellow glass the color of his later works may be brought into strict accordance with that of his earlier paintings. A subject which he painted twice—once in middle life, and again in his later years—will also, by a simple optical contrivance, afford an opportunity of demonstrating this.

INDIGESTIBLE MORSELS.—The people of Rome are (*British Medical Journal*, March 16, 1872) very much interested just now in the fate of a poor fellow, Cipriani, who has swallowed a fork in public, prongs downwards, and who is now suffering, in consequence, agonies which are the subject of daily bulletin. Some comfort may be derived by his friends from the record which has been lately published of Mr. Lund's patient at Manchester, who survived swallowing a dessert-knife six inches long; and from the perusal of a recent article in the *Journal de Médecine et de Chirurgie* (Art. 9, 263), in which instances are cited where the alimentary canal has safely supported the most unexpected foreign bodies,—among others, lizards, a file,

a teaspoon, a bat; and finally, from the whimsical but melancholy instance of a man who, to amuse himself, swallowed successfully and safely a five-franc piece, a closed pocket-knife, and a coffee-spoon, but killed himself at last in the vain effort to digest a pipe.

MORTALITY FROM SMALLPOX IN PHILADELPHIA.—The number of deaths from smallpox during the weeks ending March 30 and April 6, 1872, were respectively 84 and 73, of which 106 were of minors.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending	
	Mch. 30.	April 6.
Consumption	44	61
Other Diseases of Respiratory Organs	77	65
Diseases of Organs of Circulation	24	20
Diseases of Brain and Nervous System	62	64
Diseases of the Digestive Organs	28	19
Diseases of the Genito-Urinary Organs	7	10
Zymotic Diseases	109	113
Cancer	4	11
Casualties	8	6
Debility	44	29
Intemperance	2	3
Murder	1	0
Old Age	20	15
Scrofula	1	0
Stillborn	15	17
Suicide	1	0
Tumors	0	2
Unclassifiable	14	3
Unknown	0	1
Totals	461	439
Adults	240	222
Minors	221	217

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MARCH 19, 1872, TO APRIL 4, 1872, INCLUSIVE.

- FRYER, B. E., SURGEON.—By S. O. 43, Department of the Missouri, March 20, 1872, assigned to duty at Fort Union, N.M.
- STORROW, S. A., ASSISTANT-SURGEON.—By S. O. 77, War Department, A. G. O., April 1, 1872, granted leave of absence for sixty days.
- BREWER, J. W., ASSISTANT-SURGEON.—By S. O. 47, C. S., Department of the Missouri, assigned to duty at Fort Dodge, Kansas.
- TREMAINE, W. S., ASSISTANT-SURGEON.—By S. O. 47, Department of the Missouri, March 25, 1872, assigned to duty at Fort Larned, Kansas.
- MONROE, F. LEB., ASSISTANT-SURGEON.—By S. O. 74, War Department, A. G. O., March 28, 1872, relieved from duty in Department of the Platte, to proceed to Boston, Mass., reporting, on arrival, by letter to the Surgeon-General.
- LAUDERDALE, JOHN V., ASSISTANT-SURGEON.—By S. O. 77, C. S., War Department, A. G. O., granted sixty days' extension of leave of absence.
- WILSON, A. D., ASSISTANT-SURGEON.—By S. O. 42, Department of the Platte, March 21, 1872, granted leave of absence for thirty days, on Surgeon's certificate of disability.

NAVY NEWS.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY SINCE MARCH 20, 1872.

- Surgeon G. W. WOODS and Assistant-Surgeon C. E. BLACK detached from the Naval Hospital, Mare Island, and ordered to the U.S.S. Lackawanna.
- Assistant-Surgeon R. C. PERSONS ordered to the Naval Hospital, Mare Island, Cal.
- Dr. BENJ. F. ROGERS appointed an Assistant-Surgeon.

WEDNESDAY, MAY 1, 1872.

ORIGINAL LECTURES.

ON FIBROID TUMORS OF THE WOMB.

BY WILLIAM GOODELL, M.D.,

Physician in Charge of the Preston Retreat; Clinical Lecturer on the Diseases of Women and Children in the University of Pennsylvania, etc.

LECTURE I.

GENTLEMEN,—From the numerous opportunities which this clinic affords, you have long since discovered that the womb is more subject to benign, and perhaps to malignant, growths, than any other viscus of the body. These organic affections it is my purpose to take up in the order of their frequency; and I shall therefore begin, this morning, with the fibroid tumor, as the one most commonly met with.

The statistics on this point would be very startling, were they not somewhat contradictory. Thus: Mr. Pollock, the late Curator of the Museum of St. George's Hospital in London, reports (*Lancet*, February 7, 1852, p. 155) that, during a period of ten years, out of 583 women dying in the hospital of various diseases and at different ages, 39—seven per cent.—were found to have fibroid tumors of the womb; and that only one of these women was under the age of thirty. On the other hand, Bayle states (*Liverpool Medico-Chirurgical Journal*, vol. i. p. 61) that these tumors are present in twenty per cent. of all women over thirty-five years old; and Klob (*Pathological Anatomy of the Female Sexual Organs*, Am. ed., 1868, p. 177), that “undoubtedly forty per cent. of the uteri of females who die after the fiftieth year contain fibroid tumors.” Here is an apparent want of harmony; but it can, in a measure, be explained, if we consider, first, the fact established by these statistics, that age is a predisposing cause; and secondly, the circumstance that these averages are based upon varying ages,—viz., upon different degrees of liability. Yet, while admitting the frequency of this disease, I believe that Bayle's and Klob's estimates are entirely too high, and that their source of error lies in the promptness with which advice is sought by women thus afflicted. It is a curious fact that one or more of these fibroids will be found not only in the majority of middle-aged colored women, but—what is rare in whites—often enough in black and mulatto girls barely over twenty years of age. Between the two races there exist other marked differences, which you will do well to remember. Thus, ovarian disease and cancerous affections of the womb are extremely rare in colored women, whilst keloid growths are common enough.

Globular in form and dense in structure, the fibroid tumor varies in size from a boy's marble to a boulder taking up more room than a child at term, and weighing 30, 40, 60, and even 100, pounds. You will find it stated that it is seldom solitary, but gregarious,—two or more being usually present. From my own observations, however, from those of Fordyce Barker (*Am. Med. Monthly*, 1857, p. 143), and also from the statistics of Mr. Pollock,—who found that, out of 39 cases, 21 had single tumors,—I am inclined to think that single and multiple tumors are about equally divided. True, an examination during life will often convey the sensation of two or more tumors; but, after death, these will usually be found to be the irregular bosses or excrescences of a parent tumor. Whenever multiple, they are, as a rule, outgrowths from the peritoneal surface of the womb; and one of them then diverts the blood to itself, and increases in bulk far more rapidly

than the other. Should two happen to start together from under the mucous lining of the womb, before long the stronger one will grow at the expense of its fellow, and may even obliterate it.

In its early history, a fibroid tumor exhibits a simple increase of nutritive activity at some point in the muscular layer of the uterine wall. To all intents, it is nothing more than an exaggerated development of unstriped muscular fibres, bound together, like those of the uterus, with connective tissue, and is in fact a *myoma*,—that is, a muscular tumor. Its histological resemblance to the womb is so striking that, even after full development, a shred taken away from it may not be distinguishable, under the microscope, from one removed from the hypertrophied but unimplicated portion of the womb. If, however, from each a slice—a topographical section, as it were—be taken, and the structure of the one as a whole be compared with that of the other, in the uterus there will be seen a significant order in the disposition of its fibres; in the tumor, a purposeless jumble. Growing by an independent proliferation of its own cells, a fibroid neither invades adjacent tissues nor becomes intimately incorporated with them, but, as it increases in bulk, simply displaces them by crowding them away on every side. The connection between it and the uterine stroma consists merely of delicate vascular filaments from its areolar capsule, which are so frail that, unless some inflammatory action has glued the tumor to its nidus, it may be shelled out as easily as a ripe orange can be peeled out from its rind.

Unlike malignant growths, fibroid tumors very rarely begin in the cervix uteri, but at some point above the os internum; nor are they found in the anterior wall so frequently as in the posterior. Their growth, being in the direction of least resistance, is determined by the stratum of uterine tissue in which they happen to start. Thus, if one has its site in the centre of the uterine wall, it will bulge as well into the uterine as into the abdominal cavity; but more into the latter, because the resistance in that direction is less. If it starts from a point nearer to the mucous lining, it will project into the uterine cavity. Should it take its origin from the muscular layer under the peritoneal investment, it will grow out of the womb into the abdominal cavity. Now, since this accident of position gives variety to the symptoms of uterine fibroids, graduates the intensity of suffering, and modifies their prognosis and treatment, it has very appropriately been chosen as the basis of their classification,—thus:

(a) *Subperitoneal, subserous, extra-uterine, or surface* fibroids are those outgrowths from the womb which project into the abdominal cavity and carry before them a fold of peritoneum.

(b) *Interstitial, parietal, intermediate, or intra-mural* fibroids denote those which are imbedded in the uterine wall and are covered on all sides by uterine tissue.

(c) *Sub-mucous, intra-uterine, or cavity* fibroids are those ingrowths into the uterine cavity which start from that stratum of uterine tissue nearest to the mucous membrane and are covered by this membrane.

The prime cause of these growths is perhaps unknown; but they undoubtedly increase under the stimulus of undue uterine congestion. Sexual intercourse always aggravates their symptoms, and marriage is pretty sure to start the growth of one hitherto dormant. Sterility is alleged to be a predisposing cause, and so is single life,—because, from this point of view, both old maids and barren wives suffer from the congestion due to uninterrupted catamenia; and the latter, in addition, from that of unfruitful sexual excitement. I am, however, bound to say that the statistics on this point have been pushed to illegitimate conclusions, as you will see from the table on this blackboard:

	Fruitful.	Sterile.	Single.	Total.
Dupuytren.....	42	12	4	58
Malgaigne.....	11	10	4	25
West.....	36	7	7	50
McClintock.....	11	10	4	25
	100	39	19	158

While willing to concede that 19 old maids to every 158 women who have reached the prime of life is a larger proportion than that deducible from our own vital statistics, I am not so sure that it is much above European averages. Again, to my thinking, this table leaves open the question whether these tumors are the cause or the effect of sterility. For, mind, the heading "Fruitful" does not indicate the condition of fecundity, but simply one in contrast with that of absolute sterility: thus, out of West's 36 cases under this heading, only 16 had more than one pregnancy. It follows, then, that it is just as reasonable to attribute sterility as infecundity to the presence of these tumors; and, as a corollary to this, that sterility is more likely to be their effect than their cause.

The proliferation of connective-tissue cells, determined by the congestions and extravasations of dysmenorrhœa, is advanced by some writers as a common cause. This opinion is strengthened by the striking fact that dysmenorrhœa is the frequent antecedent of chronic metritis,—a disease in which the structure of the thickened wall resembles so much that of a fibroid nodule that it is hardly possible to tell them apart. Further corroboration of the congestion-theory is gained by the circumstances that fibroids rarely appear before the age of thirty, and never before puberty; that the period of their greatest activity corresponds to the period of greatest menstrual activity; that after the menopause they usually cease to grow, and sometimes shrink away; and, finally, that during the catamenial flux they temporarily so increase in size as often to cause dysuria and other pelvic disturbances. Other causes of these tumors undoubtedly exist. After the stretching and weakening of uterine fibres by repeated pregnancies, these fibroids have been observed to start at points where the involution has been imperfect; and my friend Dr. Wm. F. Jenks tells me that on several occasions he has found a blood-clot to be their nucleus.

Subjective symptoms are not always evoked by the presence of a uterine fibroid, but when present are manifold, and yet not so diagnostic as to do more than arouse a suspicion, confirmable only by a physical exploration. In the usual order of their sequence, menorrhagia will first appear, or the intervals between the catamenia will shorten. Next will be added dysmenorrhœa and uterine colic; for during the menstrual flux the tumor swells up to such a bulk as to arouse the expulsive efforts of the womb. Metrorrhagia, alternated by a copious leucorrhœa, will then set in, and rapidly weaken the woman, who will now be worried by reflex uterine symptoms, such as nausea, headache, cardialgia, and palpitations. Finally, as the fibroid increases in size, there will follow a train of symptoms owing to the mechanical effects of pressure on the pelvic organs, vessels, and nerves. This consists of dysuria, vesical catarrh, difficult defecation, hemorrhoids, and of œdema, varices, and cramps of the lower extremities. The objective symptoms are far more distinctive, but, as they are modified by the site of the tumor, their consideration must be embodied in the history of each variety.

The *subperitoneal* fibroid grows more rapidly and attains a greater bulk than either of the other two varieties. Although of stone-like hardness, and nodulous, it yet begets symptoms less exacting than those of the others, and rarely destroys life. Its attachment to the uterus, at first broad and sessile, often becomes constricted and elongated into a pedicle, long enough to permit great

mobility in the cavity of the abdomen, almost independent of the movements of the uterus. Sometimes, through some rude fall or sudden succussion, the stalk snaps, and the fibroid will then roll about at large in the abdominal cavity. This severance from the womb is not followed by the death of the fibroid, for, like a loose cartilage in the knee-joint, or like a fœtus escaped from the womb or from an extra-uterine cyst, it will retain its vitality indefinitely,—in one recorded case, as long as fifty years. Again, it will be found separated from the womb and attached to other organs. In such situations it is easily recognized as a parasite by its histological characters,—its uterine origin being plainly indicated by the presence of organic muscular fibre. This transplantation is brought about in two ways: By inflammation the peritoneal investment of the fibroid contracts adhesions to that of the abdominal wall, or to that of some movable viscus, as the bladder, intestines, or rectum, which, by its contractions, dilations, or movements, so lengthens out the pedicle as to break it. Or the fibroid may glue itself to a fixed point, such as to some part of the pelvic tissues; and afterwards the condition of pregnancy or the growth of an intra-mural tumor, by causing an increase in the size of the uterus, puts the stalk to a stretch which it cannot bear. In one case, related by Simpson, the uterine contractions after labor broke the pedicle of a fibroid which had become attached to the walls of the abdomen during the last months of gestation.

If the pedicle of an extra-uterine fibroid is long and narrow, the uterus will not usually increase in size; indeed, it may take on atrophy. Upon external palpation, conjoined with a vaginal examination, there will be found in the cavity of the abdomen a movable tumor of apparently large size. But, in estimating the size of an abdominal tumor, remember that it always seems larger than it really is, because the fingers grasp not only the tumor, but also a double thickness of the abdominal walls. Due allowance must be made for this; else, the fatter the woman the larger will the tumor be deemed. A good way of estimating the amount of this error is to pinch up a fold of the abdominal wall between the thumb and forefinger, and then to subtract its thickness from the apparent diameter of the tumor. Should the displacement of the tumor communicate motion to the handle of a sound passed up to the fundus, a uterine attachment may be safely inferred. When firmly grasped, its stony hardness and the absence of any sickening pain will exclude the idea of its being an enlarged ovary. As a rule, a subperitoneal fibroid does not distress the patient by any very irksome symptoms. A pedunculated one may lodge in the retro-uterine space and give rise to much pelvic disturbance; but, before attaining any very great bulk, it will sometimes work up out of the pelvic cavity and perch on the brim. Unless, then, the rectum or bladder is inconveniently pressed upon, its discovery by the woman is almost always accidental,—often enough not until it has grown to a size double that of the fist.

This patient, S. R., thirty-five years old, has been twelve years married without ever conceiving. Although her left lung contains a large cavity, and her strength is much spent by pulmonary hemorrhages, she has, in great alarm, come a distance of over a hundred miles to consult me about an abdominal tumor, which she, by the merest chance, discovered a week ago only. Several of you examined her in my private room, and found two nodulous growths squatting upon the surface of the womb, and one tumor, as large as an orange, floating about in the abdominal cavity. The uterine cavity measures three inches, but the additional half-inch is due to the two sessile outgrowths, and not to the floating tumor, which is moored to the womb by a long and slender stalk. These facts were determined by the

extreme mobility of the tumor and by the distance to which it had to be pushed over to one side before any motion was imparted to the handle of the sound. To the gentlemen who examined her it seemed strange that neither uterine nor pelvic symptoms had been awakened by the presence of such large foreign bodies. But the truth is, that none of these tumors have crowded her pelvic organs; and, further, that her catamenia have been long suppressed by the constitutional effects of her lung-disease. On the other hand, I have hardly succeeded in convincing her that her chest-trouble is by far the more serious one; and she returns home to-day somewhat dissatisfied that my treatment is limited to arsenic, iron, and cod-liver oil.

This, gentlemen, is a very instructive case, because you will often meet with such in practice. Nothing unnerves a woman more than the discovery of a tumor in her abdomen. By sheer brooding I have seen one lady become insane, and another go into a decline. You must, however, be on your guard against imaginary tumors—phantom tumors, we call them—which women have a knack of finding in their abdomens. Whenever you are consulted for any kind of uterine fibroid, tell your patient, as I now tell this woman, that it never degenerates into cancer, and very rarely grows rapidly; that it is not an ovarian cyst, seldom proves fatal, and that, even when large, it is usually inconvenient only from its weight. Calm her fears with the hope that, after the climacteric, her tumor may shrink away, and perhaps wholly disappear. The stoppage of the menses in the woman before you will probably prevent any further increase in the bulk of her tumors; but then, on the other hand, it here imports extensive disease of the lungs. She leaves us, as you see, more light-hearted than when she first came, but still not altogether satisfied. Before another patient is admitted, let me point out to you one error in my treatment of this case: I ought to have prescribed a mental salve in the shape of some local application to the abdomen. Sick adults, like children, often need humoring; and he is often the most successful practitioner who knows when and how to humor.

When the fibroid is *interstitial*—that is, imbedded in the uterine wall—it will be attended by a hypertrophy of the whole uterus, but more especially of that portion of its muscular layer which forms the nidus. There will also be a corresponding enlargement in the uterine blood-vessels, which will sometimes emit a sound quite like the “placental bruit.” The “placental bruit” of pregnancy is wrongly so called, for the sound is owing less to the circulation in the placenta than to that in the enlarged uterine vessels at its site. The louder the bruit, then, heard over a fibroid tumor, the thicker is that layer of uterine wall between it and the ear,—a fact of great importance in establishing a diagnosis. The mucous membrane becomes vividly red, and thickens, but never to the production of a decidual lining, as in intra- or extra-uterine foetations. Turgid veins traverse it, and a sanguinolent mucus bathes it. The uterine cavity, rendered tortuous and rigid by the bulging-in of a nodulous tumor, cannot usually be measured by the ordinary sound; but this flexible one of annealed silver will commonly adapt itself to the irregularities of the track and pass up to the fundus. Should you be baffled in an exploration by either of these metallic sounds, you have in reserve a plan devised by Dr. Sims: A No. 6 bougie, stiffened by its wire and slightly curved at its tip, is fairly introduced within the os uteri; in order, now, that the wire should not further advance, its ring is firmly held by one hand, whilst with the other the bougie is pushed up into the cavity. By this manœuvre the vaginal portion only of the bougie is kept stiff, whilst the uterine portion, remaining pliant, moulds itself to the distorted uterine cavity. According to the

size of the fibroid, the sound will then pass up a distance of from three to seven inches; but it should be used with great gentleness, as its passage is very likely to provoke a hemorrhage.

An interstitial fibroid may in time be forced towards either the abdominal or uterine cavity, becoming extra- or intra-uterine, as the case may be. This is brought about by the continuous peristaltic action of the uterine walls, which in health serves to clear out the mucous and menstrual secretions. In this manner also an originally submucous fibroid may be converted into a true fibroid polypus. But it is doubtful whether, as has been contended, an imbedded fibroid ever becomes polypoid in character without first losing its mucous or muscular investment,—that is to say, without the process of spontaneous enucleation. This distinction between a true and a false fibroid polypus I shall enlarge upon in a future lecture on polypi. The vitality of the interstitial fibroid is of a lower grade than that of the two other varieties; at least so it seems to me, from the way in which it behaves. It is less able to resist disturbing influences, and therefore the more frequently undergoes structural changes. It does not itself often inflame, but its serous investment is liable to attacks of inflammation, resulting sometimes in pelvic or even general peritonitis. Bearing this in mind, you will not handle them roughly, nor needlessly dilate the cervical canal with tents. In my experience, these attacks of localized peritonitis have usually taken place during or just after the flow of the menses, and I have therefore thought that they could sometimes be attributed to the escape into the peritoneal cavity of the contents of a mature Graafian follicle. For the bulk of the tumor may so disturb the relations of the pelvic organs as to make it impossible for the fimbriated extremity of the Fallopian tube to grasp the ovary.

The functions of a womb encumbered by one of these fibroids become disordered. Pregnancy rarely takes place, and, when it does, usually ends in an early abortion. This small bottle contains a three-months embryo, which was expelled last week from a womb with a large fibroid in its posterior wall. Even after a clean delivery, the oozing of blood was so alarming as to demand the use of the tampon. The cause of this abortion was probably the unequal development of the uterine walls.

The earliest and most marked disturbances produced by this kind of fibroid are, however, in the catamenia. These grow more and more abundant; they will perhaps anticipate the natural time, or become metrorrhagic. Luckily, these symptoms are not so violent as in the next variety,—the submucous. This rule is, however, not a constant one, for here is an exception to it: This patient, Mrs. S., aged forty, and the mother of six children, is almost exsanguineous from a ceaseless oozing of blood, which arises, I find, from a uterine fibroid as large as a child's head. Four years ago she miscarried, with much flooding, and she has since run the gauntlet of menorrhagic and metrorrhagic attacks, whilst the womb has been slowly and steadily increasing in size. The flexible sound passes up a distance of six inches in front of the tumor, which is therefore in the posterior wall, and its passage very decidedly increases the hemorrhage. The cervix is not effaced, but abruptly projects from a stony hard body; it feels much like the nipple of a breast greatly engorged with milk. The pelvic cavity seems blocked up by a dense and immovable tumor, quite smooth in the vagina, but studded with nodules on its supra-pubic aspect. Defecation is difficult, and the efforts to empty the bladder painful and frequent. Upon auscultation, a very distinct murmur is audible over the whole uterine body. The length of the cervix, the great size of the tumor, and the bosses on its abdominal surface lead me to think

that it is an interstitial fibroid, although the excessive catamenial flows and the intercurrent hemorrhages point rather to a submucous fibroid. To arrive at a correct diagnosis, and also to lessen the waste of blood, I shall dilate the cervical canal with sponge tents.*

When the fibroid is *submucous*, the uterus enlarges as in pregnancy; the cervix becomes shortened and oftentimes effaced; whilst the os is likely to be found ring-like and patulous. Prominent among the symptoms will be pelvic pains and uterine colic. The functional disturbances will be greater, and the local congestion more intense, than in the preceding variety. Hemorrhage, and that in excess, will rarely be absent. The sound will penetrate to a depth greater, in proportion to the size of the tumor, than in the interstitial. In short, all its symptoms are commonly more exacting and more marked than those of the other two. But no great stress must be laid on their intensity as a means of diagnosis, for this relation does not always hold good. In fact, I have seen interstitial fibroids exhibit very urgent symptoms, whilst those of a submucous growth have been hardly appreciable.

(To be continued.)

ORIGINAL COMMUNICATIONS.

DEATH FROM ACCIDENTAL POISONING BY CARBOLIC ACID.

BY W. E. TAYLOR,
Surgeon, U.S. Navy.

U.S. FLAG-SHIP PENSACOLA (second-rate),
PANAMA, February 23, 1872.

THE following is a correct account of the affair, as far as can be ascertained.

T. R., nurse; aged 23 years; native of Ireland.

About 4.50 o'clock this P.M., the apothecary, Charles O'Hanlon, and T. R. were engaged in arranging the medicines on one of the shelves in the locker in the dispensary of this ship. The apothecary turned towards the door to speak to one of the men, and, while speaking, his back was towards T. R., who continued his work. The apothecary states that his back was not turned longer than ten seconds, when, hearing an unusual noise behind, he turned immediately, and, seeing T. R. in the act of falling, he caught him, laid him down, and sent at once for assistance. Dr. Flint and myself were in the sick-bay; we repaired immediately to the dispensary, seeing the patient within one, or certainly two, minutes after the occurrence. He was then totally insensible; pulseless; pupils dilated; face pallid and pinched; the respiration was of a gasping character, and there had been an involuntary discharge of urine. The interval between the respiratory acts became longer, and, after one or two partial efforts, life ceased; respiration continuing for several seconds after the cardiac impulse ceased to be perceptible.

There were no convulsions nor vomiting; nothing beyond the condition above described. The fatal event occurred so rapidly that there was not sufficient time for the manifestation of any further symptoms, nor was there an opportunity for the exhibition of any remedial measures. Death took place in about three minutes from the time the apothecary heard the first noise.

There was a strong odor of carbolic acid in his breath, but no trace of it about his lips or face. Upon examining

the medicines on the shelf, a bottle of the capacity of one pint, and about two-thirds full of "acid carbolic impure," as furnished from the U.S. Naval Laboratory at New York, was found without the cork in it. As no one saw him drink anything, and as he did not speak or show any signs of consciousness, the inference was that, the moment the apothecary turned away, he hurriedly took up the bottle and swallowed some of its contents by mistake for some stimulant.

He was in the habit of drinking whenever an opportunity occurred, and on this account was never allowed to dispense liquor.

This supposition of the accidental origin of the poisoning was strengthened by the fact that a bottle of the same size, containing tincture of ginger, was found standing close to the carbolic acid; and as the allowance of tincture of ginger had been nearly used, and could not be accounted for in a legitimate way, it is more than likely that he had been in the habit of using it, and intended doing so upon this occasion.

It was impossible to ascertain the exact quantity swallowed, but, from the manner in which it was done, it is not likely that more than one ounce was taken. The body was allowed to remain undisturbed during the night,—a small quantity of ice being placed on the abdomen.

February 24, 1872.—Post-mortem examination was made this morning at six o'clock, thirteen hours after death. Rigor mortis well marked. Body well nourished; skin pallid, with some post-mortem discoloration about the shoulders, back, and hips. No evidence of commencing decomposition.

Owing to the inconvenience attending such examinations on board ship,—although every facility was afforded me,—it was decided to examine only the stomach and brain.

Upon opening the abdomen, the odor of carbolic acid was very perceptible; the viscera were in a good state of preservation. The stomach was moderately distended, and intensely congested externally, being of a dark venous hue. It was removed entire, after ligating its cardiac and pyloric extremities. Upon being opened, it was found to contain about one pint of a whitish-colored liquid smelling strongly of carbolic acid, and some undigested food having also the same odor. After removing the contents, the whole of the mucous lining gave positive evidence of the corrosive effects of the poison,—showing the characteristic white appearance seen after the local application of the undilute acid. Beneath this white film the mucous membrane was intensely congested, of a chocolate color, strongly corrugated,—thicker, tougher, and much more rigid, than normal. This condition was especially well marked in the cardiac extremity and along the greater curvature, and also in the lower end of the œsophagus, and in a less degree along the lesser curvature and at the pyloric extremity, although no part of the internal surface of the viscus had entirely escaped.

The skull was opened in the usual manner. The scalp and the meninges of the brain were very much congested, the vessels being filled with fluid blood of a dark color. There was no effusion of blood or serum either beneath the membranes or in the ventricles; and, with the exception of a very few bloody points of small size in the cerebrum, and some injection of the choroid plexus, the remainder of the cranial contents seemed to be in a normal condition.

The most marked feature in this case was the rapidly-fatal result. It might almost be termed instantaneous, as, from the most careful estimate, not more than *three minutes* could have elapsed from the swallowing of the acid until death ensued. I know of scarcely any poison capable of producing death in so short a time, except, possibly, strong hydrocyanic acid,—the symptoms from

* This was accordingly done at her house a week later, and the growth found to be interstitial. Very unfortunately, the process of dilatation lighted up a peritonitis, from which she died on the eighth day.

poisoning by which, I may add, closely resemble those noticed in this case.

Having advanced thus far in the history of this interesting case, it may be well to inquire, and, if possible, to form some idea of the mode by which carbolic acid is capable of destroying life so rapidly.

Two modes have suggested themselves,—viz.: 1. By its powerful irritant effect, applied, as in this case, instantaneously to the whole lining membrane of the stomach and œsophagus,—thereby causing “death from shock” in the same manner as a blow upon the epigastrium; or,

2. After absorption, by its anæsthetic and paralyzing effect upon the sympathetic and pneumogastric nerves and their connections, thereby suspending or destroying their vital action, and bringing about cessation of function in important organs supplied by them,—as the brain, heart, and lungs.

It is a well-established fact that concentrated carbolic acid, when applied to the skin, produces decided anæsthesia in a very short time. Dr. W. H. Jones, U.S.N., now attached to this ship, has upon several occasions applied the acid to the skin of his forearm, with the effect of lessening its sensibility, in about twenty seconds, to such an extent as to allow the part to be freely incised without pain.

It has been used upon several occasions, on board this ship, to mitigate pain in opening buboes, etc., and always with good effect; and, if it causes anæsthesia when applied externally, there is no reason why the same effect should not be produced when it is applied internally; it therefore seems reasonable to suppose that the rapidly-fatal effect of carbolic acid in this case can be accounted for in a satisfactory manner by its anæsthetic and paralyzing effect upon the great nervous centres following its immediate absorption from the stomach.

Had life been prolonged, or the dose been smaller, there is no doubt but that vomiting, purging, and other evidences of its action as an irritant poison would have been observed; but, as death occurred too rapidly to be attributed to its irritant or corrosive effects, it becomes necessary to look farther for a solution of the problem; and it seems rational to suppose that the solution of the *modus operandi* of an immediately-fatal dose of carbolic acid has been given in a satisfactory manner in the second proposition.

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE.

CLINIC OF PROF. JOS. PANCOAST.

Reported by FRANK WOODBURY.

NEW OPERATION FOR THE RELIEF OF PERSISTENT FACIAL NEURALGIA.

CASE.—Mr. B. F. A., of Bangor, Me., presented himself at the clinic January 3, 1872, seeking relief from facial neuralgia in its severest form,—*tic douloureux*,—which had tortured him for the past seven years. He stated that he had suffered to such an extent that he would rather die than live any longer in such misery, and was anxious to have any operation done that would afford him relief, without regard to its risk or severity, so that it removed the pain. He is seventy-two years of age; in frame slight and wiry; rather below the average height, and, though apparently not enfeebled by age, has a haggard expression on his countenance from loss of rest and constant suffering.

The pain he describes as intense, accompanied by spasmodic twitchings (*tic*) of the muscles on the left side of the face. It extends from the body of the lower jaw, to the cheek, border of the tongue, and up along the temple, without passing over

the median line of the forehead. It is not constant; coming on in paroxysms, worse at one time than another; generally commencing with a pricking sensation, and is brought on by trifling causes, such as a draught of air or the slightest puff of wind on his face, and at times when he simply opens his mouth to speak. Sometimes a month will pass without an attack; and at other times the pain is so constant as to prevent his sleeping, as he says, “a half-hour in a whole week.” He thinks it is worse in wet or changing weather, and on rising in the morning. Frequently, on attempting to eat, the pain will come on,—severely at first, and afterwards decrease in severity while he is eating. All the teeth have been extracted on that side of his mouth to relieve the pain, but without result. He tried electricity last summer, with but transient, if any, relief.

The lecturer observed, “The pains seem to be exclusively limited to the third division of the fifth pair of nerves in this case, as we ascertain by tracing out the lines of painful coruscation. Their starting-points are the gum of the lower jaw on the left side, and the corresponding sides of the cheek and tongue. The pains which shoot up the temple along the auriculo-temporal nerve, show that the third division of the fifth pair is involved, in all its branches, as far up as the foramen ovale, by which the nerve emerges from the skull. I have not seen it exist in all of the branches of this nerve (the fifth pair) except in a few instances. One was the case of a lady from Kensington, who, we afterwards ascertained, had a malignant tumor developed in the sphenoidal sinuses, which by softening and expanding the wall of one side, and impinging on the Casserian ganglion, affected all three divisions of the nerve simultaneously. The first or ophthalmic branch of the fifth pair is usually affected alone in neuralgia.

“We often also see the second or supermaxillary branch alone affected, as manifested by pains at the infra-orbital foramen and in the upper jaw, cheek, or gums. A diseased dental pulp is the most common cause of the disease in either jaw. And yet, when the tooth has been drawn, and sometimes after the extraction of the whole set on that side, the nerve will still be in some unnatural condition in the maxillary canal or some other part of its course, so as to keep up the neuralgic pains. It would seem that the investing sheath or neurilemma of the nerve was capable of extending this morbid condition up to the cranial foramina alone; whilst in others it must reach the Casserian ganglion or the cerebro-spinal origin, in order to produce the reflex nervous pains.

“It is quite usual to find the second and third branches of the fifth pair conjointly affected in the same person, as was the case in three individuals upon whom I performed, with entire success, the operation I propose to do to-day. I think it not improbable that the explanation of this is to be found in the close proximity of the two foramina (ovale and rotundum) by which the nerves emerge; while the first or ophthalmic branch enters loosely into the orbit by the sphenoidal fissure, and only at the supra-orbital notch or foramen has its neurilemmatic investment brought into immediate connection with the periosteum lining the place of its passage in the bone. As a general rule, it is at the points where the nerves pass through bones, or are brought in contact with the periosteal or other fibrous tissue, that we find the painful points in neuralgia. I am the more confirmed in this view from the fact that in almost every case where I have cut the supra-orbital nerve for frontal neuralgia, I have found the nerve divided and passing through several small foramina in the bone, instead of a single hole or notch in the orbital arch, as is usually the case. I have likewise observed the same thing in two of my resections of the inferior maxillary nerve,—viz., that the nerve had some of its smaller branches passing by minute orifices in the bone, just at the margin of the foramen ovale; thus leaving the neurilemma of the nerve, from this unusual division, more liable to be affected by the morbid condition of the fibrous tissues,—syphilitic, rheumatic, or simply inflammatory, as the case may be.

“Had the pain in the instance before us extended to both the other divisions (the first and second) of the fifth pair, the prognosis would have been less favorable, as we would have been justified in suspecting the existence of some morbid growth, either from the walls of the cavity of the sphenoid bone or from the meninges, pressing upon or disturbing the encephalic por-

tion of the nerve. In some cases it may, however, depend solely upon a general morbid condition of the periosteum. When facial neuralgia is accompanied by spasmodic twitchings of the affected parts, it is popularly called 'tic douloureux,' and in the worst cases these twitchings are accompanied by some flushing of the face. In former times they used to cut the ramifications of the facial nerve (portio dura) on the same side of the face for this affection, because the muscles supplied by this nerve were thrown into spasmodic action. This operation paralyzed the muscles without relieving the pain, and is no longer practised.

"If the pain is limited to the anterior portion of the inferior dental nerve, as we might infer from the fact of its not being habitually reflected along the branches of the main trunk which come off near the foramen, we can sometimes effect a cure by trephining the ramus of the jaw-bone and cutting away half an inch of the nerve. If we should content ourselves, however, with merely dividing the nerve, the operation would fail from the speedy reunion of the nerve-trunk; as the cicatrix in a nerve left after operation, if less than a quarter of an inch long, offers but little obstacle to the passage of the nerve-fluid. Pain, as has been observed, may continue even after the aching tooth that has excited it, and even all on the same side, have been drawn; for the nerve-filament leading to it remains in the bottom of the socket, where pressure may be made upon it by some deposit from the lining membrane of the canal, or from neurilemmatic inflammation, and so keep up the neuralgic suffering unabated,—excitable even by any friction on the toothless gum itself. In such cases the operation just mentioned will ordinarily afford relief. But where for a long time the muscles of mastication have been involved, with pain in the cheek, lower lip, and temple, we must have recourse to excision of the third branch, high up. Even where the buccinator nerve seemed to be the only one affected, I have seldom been able to give more than temporary relief by the excision of a portion of that trunk alone. The place I select for the excision of the trunk and branches of this nerve is at the point where the nerve emerges from the cranium through the foramen ovale and begins at once to distribute its branches. The process by which I reach it enables me also to excise a portion of the trunk of the second branch when its ramifications are involved in the neuralgic suffering. This operation I have performed in three previous cases. In the first instance (in June, 1860), I was led to undertake it in the case of a patient under my charge at the Pennsylvania Hospital. This man was not only affected, like the patient before us, with tic douloureux of the inferior maxillary nerve, but suffered to an equal extent in all the branches of the second division of the fifth pair, or upper maxillary nerve. He had been a sufferer for fifteen years. He had been in good hands, and almost every remedial measure had been tried in vain, even to division of the branches of the portio dura nerve. Every tooth in both jaws had been pulled, years before. The pains seemed to concentrate more particularly in the buccinator nerve. Hoping that the excision of this nerve might afford some relief,—as any rough friction on the parts to which it was distributed excited pain and spasms,—I opened the cheek and took away half an inch of its trunk, but without any good result. I then dismissed the case from the hospital. Some time afterwards he stopped my carriage in the street, and threatened to commit suicide if I would not undertake some operation that might relieve him of his incessant agonies. I had before thought of this new process of operation which I shall show you to-day; but it was untried, and I put its consideration aside as being too hazardous. On account of his importunities and my great compassion for his sufferings, I sent him back to the hospital, and performed the operation the next day, which resulted in his immediate relief; placing him, as he said, in comparison with his former state, in perfect elysium. Since then I have repeated the operation upon one woman and upon another man, with entire success in all the cases, so far as my knowledge extends; that of the woman, whom some of the class recollect seeing me operate upon in this place last winter, being the most difficult, on account of the narrower facial spaces met with when I came to excise the trunk of the second branch in the pterygo-maxillary fissure, which forced me to crush in a little the posterior wall of the antrum.

"Before operating on this patient we will give him a few

days' rest in the hospital, and endeavor to prepare him for the operation. To relieve pain in the interval, he can use this potent antidysinous ointment:

℞ Morph. acetat., gr. iij,
Atropiæ,
Aconitiæ, āā gr. i,
Veratriæ, gr. vij,
Adipis, ʒi. Misce.

"About a twelfth of a teaspoonful to be rubbed over the seat of pain several times a day.

"In ordinary cases it would be better to leave out the atropia, to avoid dilatation of the pupil."

January 6.—The patient was brought in and the operation performed, as follows. After he was well under the influence of the ether, Prof. Pancoast made a trap-door incision through the skin and subcutaneous cellular tissue,—in front of the parotid gland, above the duct of Steno,—and down to the bone immediately over the coronoid process and ramus of the lower jaw, uniting them by a cross-cut of equal depth on the ramus, as shown in the figure,* in which, however, the vertical lines are sloped too much forward at their upper extremities. The



flap, including the masseter muscle, was then dissected loose from the bone, and turned up. The tendon of the temporal muscle was cut loose from the point of the coronoid process and pushed up under the zygoma. The coronoid process was then sawed off at its junction with the ramus, and taken away. The great space leading to the speno-maxillary fossa, filled with cellular tissue and vessels, was now exposed. The forefinger was passed down deeply to break up the structure and isolate the trunk of the internal maxillary artery, which was raised on an aneurismal needle and tied; one or two of its muscular branches having been first secured as they were divided. By further breaking away the cellular structure with the finger, and using pledgets of lint dipped in aqua Pagliari (solution of benzoate of alum) as a styptic, the origin of the external pterygoid muscle from the great wing of the sphenoid bone, was brought into view. This head of the muscle was detached from the bone, partly with the finger-nail and the aid of the handle of the scalpel, and partly with a Cooper's bistoury, leaving the trunk of the inferior maxillary nerve exposed to view as it came out from the foramen ovale,—the divided head of the pterygoid being pushed out of the way. The wound being again well dried with the styptic, the various branches into which the nerve divides were visible, and were taken up one by one with curved forceps, and half an inch or more cut out of each with curved scissors, close to the foramen. After all that could be seen were removed, the knife was passed around the margin of the foramen in order to divide any branches that might come out by small foramina at its side, as the surgeon had noticed to be the case in his previous operations. A little more bleeding than usual now taking place, Dr. Pancoast used his soap-styptic in place of the benzoate, as being more potent, and yet not so destructive to the tissues as the solution of Monsel (subsulphate of iron). This styptic is made as follows:

* Taken from the forthcoming edition of Gross's Surgery.

R Alcohol. fort., ʒiij,
Potassæ carbonat., ʒij,
Sapon. castil., ʒi. Misce.

During the operation scarcely two ounces of blood were lost. The flap was brought down, and the wound closed with silk sutures and dressed with a greased compress and bandage.

The lecturer remarked, "This concludes the operation on this patient; but if he had had, as in the other cases I have referred to, the second branch of the fifth pair involved, I should proceed at once from the bottom of this wound, as I did with them, to make exsection of the root of that trunk in the following manner: The finger-nail, pushed up from the top of this wound, comes readily into the narrow pterygo-maxillary fissure, which the nerve crosses. This narrow steel rod, such as was formerly used to carry a needle-point in staphyloraphy, is turned into nearly a semicircle at its end, upon which a notch is filed to carry a very fine silk thread securely fastened upon it. This fine thread is tied at its other end to a strong ligature-thread. The object is to carry the fine thread around the trunk of the nerve, and let it draw the stronger one after it. It is done in this way: The handle of the steel rod is elevated; the other blunt curved end, carrying the fine thread, is entered at the bottom of the pterygo-maxillary fissure till it comes against the sheath of the external rectus muscle of the eye, which will be made known by the motion it gives to the ball. Then, by depressing the handle, the curved end of the rod will move round the trunk of the nerve and come out above it. From the end of this, which can be partly seen and partly felt, the fine thread can be drawn forwards with a delicate blunt hook. The fine thread is then made to pull the strong ligature after it, which will be round the trunk of the nerve. The strong thread is then tied with a firm knot down upon the nerve, and serves as a handle to it. This is now to be drawn towards the front, and Civiale's urethrotome or a delicate probe-pointed bistoury passed up behind it, so as to shave off the nerve from the side of the foramen rotundum. Then, pulling strongly upon the ligature in the backward direction, so as to make the divided front section of the nerve recede, the same instrument is passed up to shave it off on the side of the pterygoid process. The ligature then comes away, bringing with it at least a quarter of an inch of the trunk of the nerve in its grasp." In two of the three operations which he had done, the lecturer believed Meckel's ganglion was included in the section removed. This operation, in his hands, has sufficed to give perfect relief from the neuralgia in the branches of this nerve, and, so far as he yet knows, the relief has been permanent. "But if it was desirable to give greater security against the return of the neuralgia, an opening might be made over the infra-orbital foramen, and the divided trunk pulled outwards and removed, as recommended by Professor Langenbeck of Berlin. The simple division without exsection of the nerve in the pterygo-maxillary fissure, would probably suffice, with this additional operation. For twenty years past I have thus pulled out the supra-orbital nerve and detached it from the skin of the forehead, in cases of frontal neuralgia, where I have cut it just within the orbit."

January 10.—Patient brought before the class to-day. He has not had a neuralgic pain since the operation, and says that he would be willing to undergo two such operations, if necessary, in order to secure the relief he now enjoys. Professor Pancoast is sanguine, judging from the results in the previous cases, that the man is permanently relieved. There was considerable leaking from the wound after the operation,—in this case more than usual. The stitches were removed to-day, and the wound dressed with the carbolated oxide of zinc ointment (acid. carbolic. gr. x; ung. zinci oxid., ʒij).

An attempt was made to show the class that the gustatory branch of the fifth pair was paralyzed, by means of alternate applications of salt and sugar; but the patient grew faint, and the test was postponed. On a subsequent occasion it was found that the special sense of taste was entirely deficient on the left side and point of the tongue, as was to be expected.

January 13.—The patient was again presented. He has no difficulty in mastication, as the nerves and muscles which perform that office are undisturbed on the opposite side; and no one uses habitually more than one side of the mouth in chewing his food. He cannot feel the point of a toilet-pin pressed on the left side of the tongue or on the cheek,—show-

ing that tactile sensibility on that side is destroyed. He has not suffered a particle of neuralgic pain since the operation, which was followed by considerable suppuration, lasting ten days, and which came from the bottom of the wound.

At the close of February he returned to his home, perfectly relieved.

CASE OF ACRODYNIA, OR NEURALGIA AT THE POINT OF THE FINGER.

This was the case of a boy aged eighteen, whose finger had, some weeks before, been crushed in a cog-wheel. The wound had entirely healed, but the cicatrix was so extremely sensitive that he was unable to work,—any accidental touch of it giving intense pain, which shot up along his arm.

This, Professor Pancoast remarked, was caused by some filaments of the highly-sensitive digital nerve having been contused or torn by the accident, and become subsequently involved in the cicatrix; it may be that some of the Pacinian bodies which are so numerous on this nerve have been implicated. The affection is limited to one small point of pain. The same effect is sometimes seen in sewing-women, who have punctured the pulpy end of the finger with a needle so fine as scarcely to leave a mark, the slight wound giving such trouble as to render the hand almost useless for months. The only remedy in such cases is excision of the affected part of the nerve. There are strange tumors, called painful tubercles, sometimes met with in the sensitive cutaneous nerves of the leg and arm, in size varying from a pea to a hickory-nut. They seem to be developed in the centre of the nervous trunk, and have its filaments spread over them; and are so extremely sensitive that a rude touch will frequently give rise to the epileptic aura, followed by fits. They are of such peculiar consistence—resembling fibro-cartilage—that after removal they will rebound, when thrown against a hard substance, like a ball made from the elastic cartilage at the end of a sturgeon's nose. These also, with the nerves to which they are attached, must be excised as the only means of relief.

Ether was administered, and the cicatrix, with a piece of the nerve, removed. The patient returned a week afterwards, and reported himself entirely relieved.

In connection with the subject of imprisonment and injury of nerves by the contraction of cicatrices, the lecturer referred to the case of Col. Kennedy Blood, of Brookville, in this State. He had suffered from necrosis of the lower end of the thigh-bone, from which, after some years of suffering, the dead fragments of bone were removed through an opening in the soft parts upon the inner side of the limb, near the condyle. After the wound cicatrized, pain was felt from the region of the hip, down the leg to the foot. In the course of some months this became unendurable, and his health gave way from the constant pain and the loss of rest it occasioned; no therapeutic measures affording him any relief. "In this condition he came to me with the fixed resolution of having his thigh amputated, and not to listen to any other mode of treatment. After a careful examination, I came to the conclusion that the bone had become sound, and that all the trouble arose from the imprisonment of the trunk of the long saphenous nerve in the cicatrix, pressure upon which developed lines of pain, which could be traced along the branches of the nerve to the foot; at the same time there was, by reflex sympathy, excessive neuralgic pain felt throughout the whole region of the hip on that side. This pain in the hip had been for some months very severe, and was one of his reasons for insisting upon amputation. I came to the conclusion that if the trunks of the nerves involved in the cicatrix could be removed, not only the direct but all the reflex neuralgia would be relieved, and the limb saved.

"Of course, then, I would not amputate; so we compromised: I was to try my measures, and if they failed it would then be time enough to consider the practicability of a more serious operation.

"I opened the cicatrix freely, and fell upon the trunk of the saphenous and some other nervous branches above the site of the old wound. The branches seemed unusually numerous, in consequence of their all being double the natural size,—owing, probably, to thickening of their neurilemmæ. Cutting all these trunks off above, I detached them from the cicatrix that had bound them down tightly to the bone, which, being exposed by the operation, was found to be in good condition.

The wound healed kindly, and from that day to this he has been entirely without neuralgia in leg, foot, or hip; and, except a little numbness in the part from which I had cut off the nervous supply, he has a strong and useful limb. In fact, he leads an active life, and is a great still-hunter of the deer, and every year sends me one of his own killing."

OPERATION UPON A LARGE ANEURISM BY ANASTOMOSIS (TELANGECTASIS OF GRAEFE; ANGIOMA OF VIRCHOW).

Case.—Mary H., a plump infant two months old, was brought before the clinic February 21, exhibiting two large arterial tumors on the face, which the mother stated had been steadily increasing in size since the birth of the child. One of these tumors, which was seated in part over the parotid gland, measured two inches and a half in length by two in breadth, involving the greater part of the cheek on the left side; the other, the larger of the two, was situated under the chin, ovoid in shape, and fully three inches in its longest diameter. These tumors were quite small at the birth of the child; and they now present well-marked illustrations of true *nævi materni* in a developed stage. They were of a crimson hue, with an irregular but clearly-defined outline, not symmetrical in shape, and projected above the level of the surrounding skin. They were compressible and soft, and gave a perceptible arterial impulse to the touch; and when the child cried there was a sensible increase in the volume of the tumor.

The lecturer remarked that he had not this winter seen a better-marked case of *nævus* than the one then before the class. "Generally these tumors are of small size, existing at birth as a small red speck; in rare cases the size of a dime, or even larger,—having, perhaps, already made some considerable progress in utero. Their subsequent growth, in some instances, is so slow as to require months, or even years, to attain much size; while in other cases, as the one before us, their development is very rapid.

"These affections were well described by Petit, who called them '*loupes variqueuses*.' Subsequently they were still more carefully discussed by John Bell, of Edinburgh, who described them as being essentially vascular tumors, formed by the enlargement and hypertrophy of the capillaries at the seat of the disease, and hence were called by him '*aneurisms by anastomosis*.' By the dilatation of the cavities and thickening of the coats of the vessels a sort of erectile tissue is formed, somewhat like that of the corpus spongiosum urethrae; and for this reason they are frequently described as erectile tumors. Their common seat is in the under surface, or vascular layer, of the skin; sometimes, however, they are entirely subcutaneous,—often involving masses of fat, the superficial lymphatic glands, and even the periosteum of the bone itself. A violent contusion of a part, it is said, may produce these affections by causing the minute capillary vessels to take on the strange pathological habit of lengthening and dilatation, so common with the larger arteries and veins. But this is not a common cause. The increase in size in these tumors does not depend upon the development of new vessels, but upon involving in the same morbid condition those immediately about them which were previously healthy. Sometimes the arterial trunks leading to them become, by sympathy, enlarged and tortuous, and coil themselves about. The tumor thus formed is called a *cirsoid aneurism*.

"Commencing soft vascular cancer of the glands, especially the parotid, is sometimes mistaken for this affection.

"After remaining quiescent for some time, these *nævi* may, from some exciting cause, take on sudden and alarming increase in size. From the thinness of the investments, some of the capillary vessels which have undergone unusual development will sometimes present the appearance of little cysts, which have a bluish look through the attenuated skin. These, it was formerly thought, were cases in which the venous capillary vessels were particularly expanded. But when we remove them by operation, the blood is of the same arterial hue in all; the bluish appearance being, in all probability, due to the refraction of light by the thinned, semi-transparent skin. Ulceration may take place, leading to sloughing, and cause serious hemorrhage. Writers speak of these tumors growing so large as, when injured by a knock or ruptured in any way, to give rise to fatal hemorrhage. Such an event may happen. I have seen troublesome bleeding in such cases, but it is very

rare. When a tumor of this kind begins to grow, it calls for surgical interference. If it is the mere speck or pin-point aneurism that begins to throw out its branching vessels, a pin may be introduced under it, and the central point strangulated with a ligature, with the certainty of a cure. The central activity of the vessels is here seen involving the surrounding part, which will be prevented when the focus, or central vasomotor force, is destroyed.

"Large aneurismal tumors of the bluish cast, so common on the cheeks of children, require a different treatment. I am in the habit, as many of the class have seen, both this session and the last, of splitting them open from base to top with a curved bistoury, and rapidly tearing out all the abnormal spongy structure with my thumb and finger, aided sometimes with a pair of forceps and sometimes with a few touches of the knife, and then plugging the wound at once with lint dipped in the benzoate of alum styptic. Before using the bistoury I pass two or three acupressure-needles under the integuments, just outside of the tumor, and make temporary compression of the vessels leading to the aneurism, with a temporary thread or wire thrown over the needles and pretty tightly drawn. In this way little blood is lost and all the skin preserved; consequently, but little deformity will follow.

"The manner of growth of these aneurisms by anastomosis will sometimes lead indirectly to their own cure. It is well in some cases that this does occur, for occasionally we have these tumors formed in parts, as about the orbit, where we dare not operate upon them directly, and when even the ligation of both external carotid arteries has been without success. Yet, in several such cases that have come under my observation, a spontaneous cure has taken place. The *rationale* of the cure seems to be as follows: some of these little vessels, dilated into globular cysts, may have the blood coagulate in them, forming a sort of embolismus; or the smaller arteries, in the same manner as larger ones, form, on their interior surface, layers of stratified fibrin; fibrous deposits at the same time taking place in the intervascular connective tissue, so as to exert a sort of confining, strangulating influence on the mass. Though this we know does occasionally take place, yet we cannot rely upon it in ordinary cases.

"The common way of treating these tumors is by the process of strangulation, when the medium size of the tumor and its location will admit of it. Excision is better yet when the tumor is seated over a hard surface like the bones of the cranium, so that we can make pressure to stop bleeding. It leaves, if the lips of the wound are kept well together, a less deforming cicatrix than strangulation.

"A small *nævus*, before a child has been vaccinated, may be cured by vaccinating on its surface. The same result may be attained by anything that destroys the tissue, as a hot iron, or one of the common caustics. Injections of solutions of iodine or perchloride of iron were, until recently, much in vogue. But they are somewhat uncertain in their effect, and not without danger, from the risk of their getting into the circulation and producing emboli in distant parts.

"The larger arteries which send branches to the part have been tied, with the hope of cutting off the supply of blood, and thus starving the tumor. The freedom of anastomosis is, however, so great about these tumors as to make this uncertain in its effects; yet it is used as a last resort when other means of cure are inapplicable, or the tumor involves parts—as the orbit, nose, mouth, or ear—in which the immediate destructive measures are inadmissible. However, where strangulation can be performed, it is reliable and very certain in its results. If the tumor is of moderate size, pass pins beneath it, including a little of the healthy tissues just beyond the base. Use one, two, or more pins, according to the size of the tumor, and tie a thread under them as firmly as possible; cut off the points to prevent the child from wounding itself, and allow the pins to remain until the slough comes away. In cutting off the ends of the pins, care must be taken to cover the child's eyes, to prevent the pieces from flying into them."

The lecturer proceeded to ligate one of the tumors, and stated that he would defer operation on the other until the first was well. This tumor was so large that three pins, and as many ligatures, were required. Ether was then administered. Three pins were inserted under the tumor, bunching it up, and three darning-needles (the round points of which would not cut

the vessels), carrying double threads, were passed at right angles to these. The needles were cut loose and some of the ends of the threads tied together, after the manner of Liston, so as to make three separate ligatures, which were firmly tied, strangulating the whole of the diseased structure. If, after the effects of the anæsthetic had passed away, the child appeared to suffer much pain, twenty-five drops of paregoric were to be administered. Pieces of adhesive plaster were placed under the ends of the pins, and carbolated oxide of zinc ointment applied on lint and retained by adhesive strips.

February 24.—The child was brought into the clinic-room showing a healthy sore, with the slough separating nicely. Same application continued.

February 28.—The patient again presented. The slough has entirely come away, leaving a healthy granulating wound. As soon as this is quite healed, the same operation may be repeated on the remaining tumor, or we may effect the obliteration of the vessels by a darning process,—passing, in various directions through the mass, double threads of the saddler's sewing-silk, which have been soaked in saturated solution of chloride of zinc, and afterwards dried. These threads are allowed to remain, and should be very numerous. Two pins should be inserted, and a ligature thrown around the base, so as to mass the vessels together when the case will admit of it. The zinc coagulates the blood, and a suppurative tract is formed about each thread. Prof. Pancoast has in this way effected cures of nævi on the eyelids and eyebrows. It is a tedious process, but gives a better result than the introduction of white-hot needles, which is sometimes practised,—but with little effect, however, as the blood cools them so quickly.

The accompanying figure* represents one of two cases



brought before the class and operated on. In both there was an immense tumor formed by aneurism of anastomosis.

One of these—in an adult black, as seen by the figure—was limited to the upper lip, and the tumor was so large that it had to be lifted up when he took his food. The vessels in it were greatly dilated, and it was so completely spongy that the blood could all be forced out of it by pressure. An acupressure-needle was passed from side to side through the base of the lip, and a temporary wire ligature thrown over it and drawn sufficiently tight to cut off the circulation in a great measure and confine the accumulated blood in the tumor. The mucous membrane and skin were then dissected up, and turned back for about half an inch along the margin of the tumor. This incision was deepened at one end, so as to get hold of the spongy mass, which was torn away with the forceps, aided by frequent

touches with the knife. A good part of the orbicular muscle was taken away, for its vessels formed part of the tumor. Then powdered chloride of zinc was rubbed with the finger into the wound, in order to coagulate the blood in such portions of the spongy mass as might remain, as well as to alter its structure. Pledgets of lint were next introduced into the cavity, and the flaps of skin and mucous membrane reconnected by the aid of a few ligatures, restoring to the lip its natural shape. Very little blood was lost. The temporary ligature was left in place for three days. The directions given were for the assistants to watch the lip, and to loosen the wire ligature in case the lip lost its temperature, but not to take it away altogether until it could be done without reproducing bleeding. The consequence was a very satisfactory cure in about ten days.

In the other case referred to, the aneurism involved the commissure of the mouth, with about a third of the adjoining structure of each lip. Two acupressure-needles were introduced,—one from the base of each lip,—and the points made to cross on the cheek, so that the temporary wire ligatures were enabled to control the circulation. The spongy structure was removed from both lips and from the commissure, in the manner above described; the after-treatment being the same. A good cure followed in this, as in the other case, with but little deformity. In both instances the gums were red, from the dilatation of their capillaries. But these vessels, after the removal of the main tumors, have shown no tendency to further enlargement.

OPERATION FOR HARE-LIP.

Hannah K., aged four months, was presented at the clinic January 10, with a congenital cleft in the upper lip: triangular in shape, gaping below, and with its apex running into the nostril in immediate conjunction with the sesamoid cartilage.

In proceeding to operate, the lecturer remarked that this affection was an arrest of development peculiar to the part, never seen in the lower lip. When there are two fissures, one on each side, it is called double hare-lip, and each fissure is apparently opposite the place for the canine teeth,—leaving the incisor teeth, when they come through, in a tubercle by themselves, continuous chiefly with the septum narium. This included space covers the site of the intermaxillary bones, each of which, at a very early period of foetal life, should become consolidated with, and make a part of, its adjoining maxillary bone. A defect in this process of consolidation seems to be the cause of hare-lip. Even when the gap only is left in the lip, a notch will often be seen at the place of bony union, as is the case in the present instance. This congenital fissure sometimes runs through both hard and soft palate.

The habit of the lecturer is to operate on single hare-lip within the month, and on double, in the third or fourth month. It is desirable to do it before the teeth are cut, which, if the operation is not done early, are apt to come out irregular. When the fissure runs through the palate, he also operates early, as it seems to induce the bones of the two sides to approach each other, and leave a smaller gap for staphyloraphy or uranoplasty afterwards, when the child has partly grown up. There is little to be said about the common operation for hare-lip. The edges of the gap must be pared freely, so as to make two concave or angular raw surfaces facing each other. This is to give increased length, and render the lip, after union, prominent and full in its middle part, as it naturally should be. Whether this is done with the sharp-pointed bistoury, or curved scissors after the manner of Benjamin Bell, makes little difference. If the lip is narrow, the lecturer prefers the bistoury, and leaves the base of the turned-down segment adherent; which, after being sufficiently retrenched, is fastened in place at the close of the operation with a suture, so as to give the natural prominence to the lip, which would be otherwise unattainable. During the operation, spring-forceps should be applied at each angle of the mouth, to compress the coronary arteries and prevent loss of blood; this can also be obtained by the fingers of an intelligent assistant. The main points in the operation are to make the section of the edges free and complete, and to detach freely the two portions of the lip from the gum and jaw with the knife. In order to get them sufficiently loose, the knife must in some cases be carried outwards, detaching the soft parts from the very surface of the cheek-bone,—and, in cases of extreme deformity, even cutting through the soft parts on a line with the ala of the nose, so as

* This cut is taken from a photograph, accompanying a report of the case by Dr. T. B. Andrews, in the December number of *The Photographic Review of Medicine and Surgery*,—Drs. F. F. Maury and L. A. Duhring, editors.

to get a sort of flap. The parts must come together without tension. If the parts are not sufficiently loosened to obtain this, there will be great strain upon the ligatures when the parts swell with inflammation; and, instead of healthy plasma to fasten the parts solidly together, there will be suppuration, ulceration, and consequent failure. If the parts are made sufficiently loose to come easily together, union will almost always be obtained by first intention; and it matters little then whether the parts are fastened together with the regular hare-lip pin, silver wire, or the common interrupted suture. One or two delicate steel toilet-pins are passed through both edges of the wound, down almost to the mucous membrane, so as to bring them squarely together. Then a fine suture is passed through before the ligature is thrown around the pins, bringing the vermilion edges of the lip neatly together and on a level. Sometimes an additional suture is introduced, with a curved needle, near the ala of the nose. The practice of the lecturer was to surround the pins with saddler's sewing-silk,—making a few figure-of-eight, but mostly oval, turns. It is best not to have too fine a thread: it cuts, and is apt to lead to ulceration. In delicate infants, he surrounds the pins with woollen yarn in place of the thread. If it is properly done, the child may safely take the breast immediately after the operation. See that the points of the pins are cut off; apply no dressings or washes, and have the child watched, so that it may not pull at the pins; and, if necessary to prevent this, have its arms secured by a strip of bandage to the chest.

January 13.—The child was again brought into the clinic-room, and was doing extremely well.

Now the question comes up for consideration, When shall the pins and sutures be removed? Sometimes they are left in too long—turning success into failure: the plasma, which had united the parts, being changed into loosening pus by the prolonged irritation.

The upper pin was removed to-day; loosening it first by rotation before pulling it out. If the thread which surrounds it adheres, it is to be allowed to remain; otherwise, to be taken away. The upper suture may be removed to-morrow; the other pin and suture probably by the day following. If the parts then should not seem positively firm, a strip of adhesive plaster may be laid across from one cheek to the other. If it should so happen that there is no firm union, and the parts separate partly or altogether, the adhesive strips must be relied upon to keep them *in situ*. It rarely answers to re-introduce pins in the ordinary way; they would produce increased irritation,—too much of which already has probably caused the failure of the operation.

In cases of young children where there is a deep notch in the jaw opposite to the fissure in the lip, thus giving it no base for support during the healing process, Prof. Pancoast has found great advantage to result from the use of a thin plate of lead pierced with holes, and the silver-wire suture. This gives support to the lip in front where the imperfect bone has refused it behind. In applying this, the silver wire should cross over the line of union, and then pass through the holes in the opposite end of the plate.

In cases of failure to get union after the ordinary operation with the hare-lip suture, where it would not be prudent to reintroduce pins, he has sometimes seen good results follow this plan, which is a modification of Bozeman's suture. The silver wires should then be passed, at least a quarter of an inch from the raw margin.

THE HISTORY OF CHOLERA.—The *Gazette Hebdomadaire* (*The Lancet*, March 16, 1872) has just brought to a close a series of no less than seven long articles on this subject, written by M. Tholozan, physician to the Shah of Persia. The author says at the end of his last article, "In forty-one years—viz., from 1830 to 1871—five great epidemics of cholera have swept over Europe; two came from Asia, and two from western countries. A great many local outbreaks, both secondary and tertiary, and some regional epidemics, were also observed. The only authenticated respite was from 1837 to 1847,—a period of about ten years; and from 1861 to 1865,—a period of four years. Thus we have only fourteen years non-epidemic out of forty-one years; the total of the epidemical years being thus as many as twenty-seven."

COTTON-WOOL AS A DRESSING FOR WOUNDS.—Dr. George B. Shattuck writes from Paris to *The Boston Medical and Surgical Journal* for April 11, 1872, describing a system for dressing wounds and amputations, introduced not long since by M. Alphonse Guérin, Surgeon at the Hôtel-Dieu, and which is now being tried quite extensively in the hospitals there. The dressing is cotton-wool, and its application is based upon the now generally well-known property which cotton-wool possesses as a filter of atmospheric germs. According to M. Guérin, the dressing should attain four objects,—viz., it should act as a filter of the air, excluding organic germs, and consequently preventing putrefaction; it should afford an elastic compression to the limb, and an equable temperature; and should allow complete repose to the parts during the process of restoration. When well applied, Dr. Shattuck says, the dressing does fulfil these demands; and in doing so it seems to be the best, as well as the simplest, system of treatment for wounds and amputations with which he is acquainted. M. Guérin insists upon the necessity of using a large quantity of cotton, and of bandaging tightly. He has applied as much as five pounds of cotton-wool after an amputation of the leg, but generally about one and three-quarter pounds is about the amount used.

In those cases which Dr. Shattuck has had an opportunity of observing, the absence of pain, the entire comfort, and good general condition of the patient, were remarkable. If the bandage which covers the cotton be so applied as to produce the proper compression of the parts, one can tap with considerable force upon the outside of the dressing without causing any unpleasant sensation in the wound; and a patient can often be up and about with a wound which would otherwise necessitate remaining in bed. The gain, both to the patient and to the attendants, from the fact that a wound or amputation which formerly would have been dressed twice a day is now disturbed only once in three, four, or even six, weeks, will be readily perceived. The bandages should be carefully watched, and readjusted if at all loose. Should the discharge appear to any extent at the surface of the dressing, the latter should, as a rule, be changed. One of the most striking things about the dressing is said to be the very small quantity of discharge which collects, even in the course of several weeks. In one case of amputation of the leg there was not more than three ounces of pus, including that which had soaked into the dressing, upon its removal after three weeks. The pus generally has a stale but not putrid smell, and in several cases examined under the microscope gave no evidence of organic germs.

Dr. Shattuck, however, closes his letter by saying that the process of granulation is not always so rapid beneath cotton-wool as might be at first expected, and that it is better not to prolong the treatment beyond a certain point.

THE SYPHILIS-CORPUSCLES OF LOSTORFER.—The committee of accomplished microscopists (*The Boston Medical and Surgical Journal*, April 11, 1872) appointed from the Boston Society for Medical Observation to investigate the subject of syphilis-corpuses in the blood have reported, as the unanimous result of their individual and independent researches, that their conclusions are negative; that the bodies described by Lomotorfer as peculiar to syphilitic blood were found in the blood of syphilitic patients and of healthy persons as well; and that the so-called corpuscles appear to have their origin in certain physical or chemical changes to which the blood-globules are subjected in the course of prolonged microscopic examination.

DISEASES OF THE MUSCULAR WALLS OF THE HEART.—Dr. Richard Quain, the Lumleian Lecturer for this year, has taken (*Lancet*, March 23) this as the subject for his lectures. He attaches much more importance to diseases of the walls of the heart than writers generally, and shows that these are not always simply complications of valvular diseases. Enlargement of the heart, he says, may depend first on an increase in the muscular fibres; secondly, on an increase in the connective tissue; and, thirdly, on an increase of fat. The causes of enlargement of the heart may be classified thus: (1) Agencies acting through the nervous system; (2) Agencies acting mechanically; (3) Agencies originating in disordered conditions of its nutritive functions.

PHILADELPHIA MEDICAL TIMES.

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EDITORIAL.

HOSPITAL MANAGEMENT.

TWO circumstances connected with hospital-management have lately happened in London, which have given rise to much feeling. In one case a surgeon, or, perhaps, two surgeons, of the London Hospital made such representations to the committee of the hospital as to the unsatisfactory manner in which one of the assistant-surgeons to the same institution performed his duty, that the committee thought themselves obliged to call for his resignation. There can be very little doubt that the action of the two surgeons was taken without due consultation with their colleagues, and it is intimated that it was dictated rather by feelings of malice towards a colleague "with whom there had been personal differences in regard to the position he was entitled to hold at the hospital," than by the desire to advance the interest of the patients committed to his care. We do not for a moment doubt that there may be occasions when the conduct or practice of a physician should become the subject of grave consideration and examination by his colleagues, but we are equally sure that no one member of the medical staff of a hospital should ever in an underhand way plot the disgrace of a colleague.

In the other instance, the two attending-surgeons to the Orthopædic Hospital, Messrs. Adams and Tamplin, feeling themselves aggrieved by a report in which their conduct as medical officers was severely commented upon, and which was adopted at the annual meeting of the governors of the hospital, have resigned their positions. There is abundant evidence to show that the report was suggested by Mr. Brodhurst, one of the assistant-surgeons, who undoubtedly expected to profit by the disgrace of his colleagues. Lord Abinger, the chairman of the Committee of Management, who, in common with many of the other influential governors of the hospital, disapproves of the report,—some of the assertions in which have been denied by Dr. Murchison, who was quoted as authority for them,—has written to the English medical journals that he has called a special court of the governors in order that certain objectionable paragraphs may be expunged from the report. If this is done, Messrs. Tamplin and Adams, to whose professional skill and ability the hospital un-

doubtedly owes much of its present reputation, will withdraw their resignations.

Lord Abinger's letter is very damaging to Mr. Brodhurst. It shows clearly that the money by which thirty persons became subscribers to the hospital, and therefore entitled to vote, was paid by the latter gentleman; and it also shows conclusively that it was practically by these new subscribers that the report was carried. A resolution was also introduced and passed, that, after a certain number of years' service, all assistant-surgeons should have the rank of full surgeons,—which, in consequence of the resignation of his superior officers, has converted Mr. Brodhurst into the senior surgeon of the hospital.

There are, perhaps, few hospitals in this country in which trouble similar to that described as occurring at the London Hospital has not arisen. It may be easily prevented, it seems to us, by making the members of the medical staff of hospitals *ex officio* managers, as has been recently done, to a certain extent, at the Orthopædic Hospital in this city. The physician and surgeons to that institution have the right to attend the meetings of the Board of Managers, and, although without votes, may discuss questions which arise and give their opinions as to the proper management of a hospital, of which they are often better judges than the managers themselves. The adoption of such a plan would go far to bring about a good feeling between the managers and the *managed*, and to increase the efficiency of the medical service. Dr. Lionel S. Beale has suggested, through the medium of the *British Medical Journal*, that the members of the medical staff of a hospital should have a share in its management, and says he should like to hear the objections to this proposition. We do not see how there can be any; and we do see how very great advantage might spring from it if it were adopted. "I believe," Dr. Beale adds, "in one or two hospitals at this time one or two members of the staff have much influence in the Committee of Management, while their colleagues—their equals in every other respect—may have little or none. This is disadvantageous to the charity, troublesome and confusing to the members of the committee, and most unfair towards those members of the medical staff who are not represented, and who do not happen to be acquainted with the most active members of the committee." This condition of things has, we happen to know, existed at various times in more than one hospital in this city. It is an evil which demands prompt suppression; and we believe we have pointed out the way to bring this about.

In reading the correspondence in the English journals in reference to the occurrences at the London and Orthopædic Hospitals, we were struck with the fact that such matters always find their way into the medical press abroad, and that they very rarely do so in this city. An election has recently been held at the Wills Ophthalmic Hospital in this city, which resulted in the dropping of two of the members of the old staff, and in the appointment of eight attending-surgeons instead of four. No reason has been assigned for this action by the Board

of Trusts, who have control of this hospital; and its course is incomprehensible, since some of the surgeons that have been added to the staff do not practise eye-surgery exclusively, and are certainly not the superiors in reputation of those who have been dropped, and who, by a strange inconsistency, have since been created emeriti surgeons. The Board has, moreover, not exercised as much discretion in the selection of the members of the medical staff as could be wished, having placed upon it a surgeon who has committed an offence as stupid as it was dishonest, and with whom we venture to say that the majority of his present colleagues would not have consulted before his election. And yet he is suffered to remain unmolested in the place which men who are, to say no more, his superiors in their knowledge of ophthalmology, were unsuccessful in obtaining.

In other cases we have heard of unfair means being used to influence managers in their choice of candidates for hospital position; but our attention has never been drawn to the fact in such a way as to justify us in bringing it to the notice of the medical public.

THE MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

WE have from time to time kept our readers informed of the preparations which were being made by the Committee of Arrangements for the comfort and amusement of the delegates to the approaching meeting of the American Medical Association. There is every reason to believe that there will be a large attendance of delegates, many of whom will doubtless visit our city for the first time, while not a few have received the doctorate from one of our colleges. It is of course to be hoped that the meeting will be a harmonious one, and that no subject likely to provoke unpleasant discussion may be introduced,—or that, if introduced, it will be met and considered in a fair spirit.

The exhibition, of which notice was first given in this journal, is to be held in the Hall of the College of Physicians, and will continue during the session of the Association. We are told by those having it in charge that it will be a success.

THE *Photographic Review of Medicine and Surgery* comes to us this month with the following table of contents: 1. Deformity of Hip; by Lewis A. Sayre, M.D. 2. Encephaloid of Thigh; by Arthur Van Harlingen, M.D. 3. Rosacea; by Louis A. Duhring, M.D. 4. Encephaloid Tumor of Neck; by Thomas H. Andrews, M.D.

The photographs are all well executed, and we commend the *Review* to the notice of the delegates to the American Medical Association.

We also call the attention of our readers to the notice in our advertising columns of a Private Hospital for Diseases and Injuries of the Spine, which is under the immediate care of Dr. Benjamin Lee.

OBITUARY.

PROFESSOR SAMUEL HENRY DICKSON.

Dr. SAMUEL HENRY DICKSON, who died in this city, March 31, 1872, was born in Charleston, South Carolina, September 20, 1798, of Scotch-Irish parents. In 1811, at the early age of thirteen, he went to Yale College, entering the Sophomore class and graduating in 1814. In December, 1814, just fresh from his collegiate honors, he commenced the study of medicine with Dr. P. G. Prioleau, of Charleston, in whose office he remained for five years. He always entertained towards his preceptor, who was one of the prominent medical practitioners of that city, the most enthusiastic regard, and even when a very young student he received from him proofs of the greatest confidence and attachment. He attended two courses of lectures at the University of Pennsylvania, in which time-honored institution he graduated in 1819, and of the Alumni Association of which he was at his death an honored Vice-President. But his practical medical experience dated at an earlier period, for we find him in 1817 and subsequently, before he had taken his degree, actively engaged during the prevalence of yellow fever in Charleston whenever and wherever his services could be made available. Thus we see early exhibited in the future distinguished author, teacher, and practitioner that courage in the presence of sickness and danger, which was so characteristic of him in his after-years. His personal interest in these epidemics probably led him to the selection of yellow fever as the subject of his graduating thesis, which was afterwards published. He entered upon the active duties of his profession in Charleston in the July following his graduation, and was at once appointed assistant to Dr. Glover of the Yellow Fever Hospital, of which, together with the Marine Hospital, circumstances soon gave him the entire charge, he being at this time but twenty-one years of age.

From this time his practice grew rapidly, and, until he abandoned it from ill health, continued to be almost overwhelming, seriously taxing his time, and, what was of more consequence, his physical health. His income from practice soon grew to be very large, and it became necessary to call into requisition the services of two younger physicians, who remained in pleasant but laborious association with him for several years. His visiting-list of patients at one time numbered as many as eighty-three in a single day. Dr. Dickson through his long and useful life was in the habit of carefully noting down in his commonplace-book everything that might be to him worthy of permanent record, not only in his own personal experience, but also culled from the genial paths of literature. We thus learn that in 1822 and 1823, when only twenty-four years of age, he commenced to lecture, reading a course on physiology to a class of city students, and soon after, in conjunction with Drs. Ramsay and Frost, set about the establishment of a medical college in Charleston, which went into operation in 1824, Dr. Dickson being appointed Professor of the Institutes and Practice of Medicine. In consequence of a controversy with the medical society, he resigned, but with other medical gentlemen of distinction in Charleston founded another institution,—the Medical College of South Carolina,—which was entirely successful. His duties here included the same department which he had illustrated by his eloquence and ability in the other school, and this he only relinquished in 1847, when he was invited to the medical department of the University of New York, in which city he remained for three winters. He then received an urgent invitation from the Charleston Medical College to return to his old chair; Dr. Bellinger, who had filled the chair of surgery, offering to resign, leaving it to Dr. Geddings, who had previously taught that of practice. This he accepted, and on his return to Charleston received the ovation of a public dinner from his friends of the profession and others. He remained here until 1858, when he was called to the position of Professor of Practice in the Jefferson Medical College of Philadelphia, upon the death of Dr. John K. Mitchell, who had always been one of his warmest personal friends and admirers. Here he continued to lecture until within a month of the termination

of his exemplary life, and, it is said, never with more spirit and earnestness, or with more satisfaction to his auditors, than during the winter just past, when, in spite of the physical disabilities under which he was placed by continued ill health, he did not miss a single lecture. It may be stated as a matter of interest in this connection, that for twenty years past he never lectured from any written paper, not even carrying a line of heads. Although Prof. Dickson, in the later years of his life, instructed classes of greater numerical importance than those of his younger days, his services to the cause of medical education were not less conspicuous at the latter period. He not only directed the studies and courses of reading of his office-students, and their pharmaceutical manipulations in making up his prescriptions,—for such was the custom of those times,—but also read lectures to them, once giving them a whole course on medical jurisprudence. Seventy young men thus graduated from under his immediate teaching. In addition to the chairs occupied by him, he had been offered professorships in Lexington, Nashville, Richmond, and Augusta.

His health had always been wretched. When at Yale College he was ill with inflammation of the stomach, which left him with impaired digestive powers, and from 1825 he was for many years a victim of phthisis, having many large hemorrhages from the lungs, and his health did not improve until after a tour in Europe. So far back as 1837 began the obscure and painful abdominal disease from which he suffered, at times agonizingly, during the rest of his life, almost to the very hour of his death. In spite of all this, he was a man of wonderful industry. From every book—and his reading was as varied as it was incessant, embracing not only every phase of medical literature, but also all the shades of lighter or even more ponderous reading, such as poems, travels, novels, law, and divinity, everything indeed that came within his reach—he copied carefully any fact, expression, or incident that struck him, and he thus collected and filled quite a number of commonplace-books, which are beautifully written and carefully indexed. His passion for instructing himself, for learning something, continued strong almost to the last.

His principal medical systematic work was the “Elements of Medicine;” but he wrote several smaller books, on “Life, Sleep, Pain,” etc., and other subjects, and gave numerous contributions to literary and medical journals on a vast variety of topics. As late as last spring, three papers from his pen appeared simultaneously in different journals, and he has left behind him a laboriously and carefully prepared but unfinished paper on smallpox. He had also delivered a large number of addresses before medical and literary institutions, societies, etc. He presided in Charleston at the dinner given by the physicians to Dr. Marshall Hall; was appointed to publicly introduce Edward Everett to the people of Charleston; was one of the delegates to the laying of Bunker Hill Monument corner-stone, and was prominent on all occasions of general and popular interest, identifying himself with every movement of importance in his native city. He was an active member of almost all the historical, literary, and scientific bodies there, and of similar societies in Philadelphia, New York, and elsewhere, even when occupied with the cares of practice and authorship, and when suffering constant pain from the affection previously alluded to.

Of these and all other matters connected with a sketch of the distinguished subject of this notice, much more might and, it is to be hoped, will be said in an extended biographical memoir. Let us add to all these the knowledge that his friends enjoyed of the beauties of his private character. In the death of Professor Dickson, the profession lost an eloquent lecturer, whose beautiful, almost poetical, language charmed while it instructed every hearer; an author, whose chaste and refined phraseology was the theme of praise from every reader; and a practitioner and medical adviser, whose kindly sympathy and clear judgment were always ready and most generously displayed at every available opportunity. His friends, however, cherished him for his cheerfulness and geniality, his tenderness and loveliness, his fortitude and conscientiousness, his frankness and courtesy. Wherever he went, these qualities always gained him many and enduring friendships, which have ended only with his life.

Dr. Dickson's death was the result of the growth of a

large solid abdominal tumor, seated over the aorta, which had itself been dilated for a long series of years. It was probably of mesenteric origin, and by its pressure on the intestines had often given rise to serious obstruction and intense suffering. No post-mortem examination was made.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY, MARCH 28, 1872.

THE PRESIDENT, DR. J. H. HUTCHINSON, in the chair.

DR. JOHN ASHHURST, JR., exhibited the following specimens:

1. *Chronic hypertrophy with adenoid tumors of the prostate gland; granular kidneys.*

These specimens were derived from the body of a man past the middle age, who died in the Episcopal Hospital on March 15, 1872. The patient, who was of temperate habits, applied for admission on March 9, complaining chiefly of frequent micturition. A catheter was passed once to make sure that there was no distention of the bladder, but the use of the instrument was not persisted in, as rather free hemorrhage followed and gave rise to the suspicion that the prostatic enlargement might be of a malignant nature,—a suspicion which, however, was not confirmed by post-mortem inspection. For five days after his admission the patient passed water without any difficulty, but on the evening of March 14 was attacked with nearly complete suppression of urine, which continued almost up to the time of his death, twenty-four hours later.

A post-mortem examination showed marked enlargement of the prostate, chiefly affecting the lateral lobes, with dilatation of the prostatic portion of the urethra (forming a pouch of considerable size), and with the formation of several isolated masses corresponding to the adenoid or glandular prostatic tumors described by Thompson, Paget, Ferguson, and others. The kidneys were abnormally pale, and their cortical portions diminished in thickness. A careful microscopic examination was made by Dr. J. G. Richardson, who has courteously furnished the following note:

“The cortical portion . . . displayed under the microscope an excessive formation of fibrous tissue around the Malpighian corpuscles (cirrhosis), which were much smaller and more closely crowded together than is normally the case. The uriniferous tubules in the pyramids were in many instances choked up with desquamated epithelium and granular matter, but exhibited a less degree of departure from health than was manifested in the cortical zone of the organ.”

2. *Recurrent mammary cancer.*

The patient was a woman 56 years of age, from whom Dr. Ashhurst removed the left mamma in May, 1870 (see *Proc. Path. Society*, vol. iii. p. 174, and *Am. Journ. Med. Sciences*, October, 1870, p. 456). The wound healed with unusual rapidity, and the patient remained free from disease until last autumn,—a period of about sixteen months. She again consulted Dr. Ashhurst in the latter part of October, 1871, when a small cancerous nodule was found above and distinct from the cicatrix, at its inner or sternal part. Immediate removal was advised, but nothing further was heard from the patient until the 18th of the present month (March), when, having been disappointed in obtaining a cure by “rubbing” at the hands of an irregular practitioner in the northern part of the city, she desired to submit to a second operation. The tumor by this time had increased to almost, if not quite, the size of the primary growth, and was evidently on the point of ulcerating,—but was still solitary, and not adherent to the thoracic parietes, while there was no implication of the neighboring lymphatic glands. Excision by means of an oval incision was practised the following day (19th), the growth being removed with a complete investment of surrounding tissue. The loss of integument was too extensive to admit of the closure of the wound, which was, however, now (March 28) rapidly filling up by granulations, the condition of the patient since the operation having been perfectly satisfactory.

The specimen was referred to the Committee on Morbid Growths, which at a subsequent meeting reported that—

"The tumor of the breast presented by Dr. J. Ashhurst, Jr., is a well-marked medullary carcinoma. When a section is made vertically through the growth and that portion of the pectoral muscle removed with it, numerous whitish striæ or bands are seen running from the tumor into the muscle; and these portions, when placed beneath the microscope, show an active cell-proliferation in the intermuscular septa. The probability of local recidive is therefore great."

3. *Upper portion of femur, and kidneys, from a case of iliac abscess which presented certain unusual phenomena.*

The patient was a young man who entered the Episcopal Hospital in the autumn of 1871, with an abscess which had opened at the outer side of the left hip. Dr. Ashhurst took charge of the case on January 1, 1872, at which time it was evident that recovery was not to be anticipated. Besides the openings—for there were more than one—on the outer side of the limb, there were others over the crest of the ilium, posteriorly, and in the left groin above the line of Poupart's ligament; there was, however, no pelvic deformity, and neither fulness nor tenderness in the line of the sacro-iliac junction, and, though the condition of the patient did not allow a sufficiently thorough examination to permit a positive diagnosis to be made, it appeared probable that the disease had originated in an acetabular coxalgia, followed by perforation and by intrapelvic suppuration, which had found a vent at the inguinal opening. There had never been any symptoms of spine-disease, and, besides, the position of the inguinal opening discountenanced the idea of psoas abscess. There was, as already mentioned, no evidence of sacro-iliac disease; and the fact that the abscess had first pointed in the femoral region seemed to favor the diagnosis of coxalgia with secondary pelvic implication, rather than that of iliac abscess. It is, however, but fair to say that motion of the hip-joint was not at this time painful, though it subsequently became so. Two or three weeks before death a large collection of pus was found in the right femoral region, and during the last stages of the case thrombosis of the right iliac vein occurred, and produced marked oedema of the corresponding extremity. Ultimately the left thigh and leg became excessively sensitive and painful, and the slightest motion caused the patient to scream with agony. Death from gradual exhaustion took place on March 22, 1872.

A post-mortem examination was made the following day, when it became evident that the case had been really one of suppuration in the areolar tissue of the left iliac fossa (iliac abscess), the pus having made its way downwards through the sacro-sciatic notch and thus appearing on the outer side of the thigh,—having subsequently perforated the abdominal wall anteriorly, and having ultimately burst into the sheath of the psoas muscle, in which it passed upwards, producing slight erosion of one or two of the lumbar vertebrae. After escaping from the pelvis posteriorly, the pus had likewise passed upwards, crossing the spine on a level with the crests of the ilia, and forming the large accumulation which was observed in the region of the right hip. The inner surface of the bony pelvis appeared to be healthy, but the left hip-joint had become secondarily implicated, the round ligament being partially destroyed and the articulating cartilages of both caput femoris and acetabulum having almost disappeared. The liver was somewhat cirrhotic, but the only viscera which were markedly abnormal were the kidneys, of which the right presented a mottled appearance, while the left was of a peculiar creamy-white hue, probably owing to an advanced stage of fatty degeneration.

Dr. O. H. ALLIS presented a brain exhibiting an injury from fracture of the skull, in which the lesion was most marked on the side opposite the seat of fracture, where also a clot was found.

Dr. ALLIS also presented a specimen of malformation of the heart, in which there was stenosis of the pulmonary artery, perforation of the ventricular septum, and dilatation of the right ventricle. The heart was removed from a young man eighteen years of age. Among other symptoms before death was dropsy.

THE PRESIDENT said that the boy whose heart had just been exhibited by Dr. Allis was, for several years before his death,

an inmate of "The Union School and Children's Home" of this city. When on duty as attending-physician to that institution, he had had frequent opportunities for studying the principal features presented by the case. There was at all times decided cyanosis, and this became much more marked whenever the boy exerted himself unduly or was the subject of fever. Very alarming symptoms had more than once in his experience been produced by a very slight attack of fever. Generally, however, the boy had apparently fair health, but was rather undeveloped both mentally and physically. There was, on percussion, evidence of enlargement of the heart, and on auscultation a loud systolic murmur was heard over the body of the heart, at the level of the fourth rib, to the left of the sternum. It was not propagated to any extent in the aorta, and scarcely at all towards the apex of the heart.

Dr. WM. DARRACH presented a specimen of ulceration of the mucous coat of the rectum, in a child three months and twenty-six days old, which died March 26, 1872. Before death there had been vomiting, constipation, and great distention of abdomen; at first, "lumps" over the abdomen, as described by the nurse. The bowels would not be open for four, then five or six, days, and finally nine elapsed without an evacuation. The child was nourished by cow's milk and water; the mother nursed the child for a short time only.

The following were the post-mortem appearances: Emaciation was marked. The lungs were healthy. Abdomen much distended, tympanitic; skin very tense. On section, gas immediately escaped, leaving the large bowel exposed, distended throughout its whole course; generally pale in appearance except over the right iliac fossa, where the bowel was vascular for half an inch or more, contrasting markedly with the remaining portion.

Rectum generally pale, but at middle part presented, for about half an inch, great vascularity externally. Upon being opened, three or four very red elliptical ulcerated patches could be seen. The muscular coat appeared to be hypertrophied. There was very little general peritoneal inflammation,—only over the inflamed portion of the rectum. There was a small amount of fluid in the cavity of the abdomen.

Liver large and firm. Gall-bladder full of dark bile, staining the adjacent bowel.

Stomach pale, and containing fluid; mucous membrane pale and firm; no vascularity whatever. The small bowels were not examined, but presented no external abnormal signs. The colon was much distended, but pale.

Dr. Darrach thought this condition rare in children, and in consulting a number of standard works on children's diseases he had not met with a similar case. In inflammation of the cœcum, constipation is noticed as a marked symptom, in contradistinction to diarrhoea from disease of the small bowels.

Dr. A. F. MÜLLER presented a specimen of green stick fracture, in which there was fracture, in two places, of both bones of the forearm, from a boy aged fourteen, whose arm was torn off at about the middle of the humerus by being caught in a belt.

Dr. JAMES TYSON presented, for Dr. H. C. WOOD, a specimen of aneurism of the ascending aorta and its arch, from a patient dying in the Philadelphia Hospital. The coats of the vessel were the seat of atheromatous change, and were thickened to measure four lines.

Dr. TYSON also presented, for Dr. WM. PEPPER, a specimen of syphilitic gumma of the liver, from a colored woman aged twenty-five, who died in the Philadelphia Hospital, and was the subject before death of left hemiplegia and paralysis of the distribution of the right oculo-motor and abducent nerves.

The post-mortem examination revealed the gummy tumor exhibited in the liver, but the lesions of greatest interest were found in the brain. The calvarium was much thickened, and several spiculæ of bone were found along the longitudinal sinus. Several flat broad-based gummy tumors were found springing from the inner surface of the dura mater; one over the convexity near the longitudinal sinus, another over the posterior part of the left hemisphere. There was also another large gummy growth filling the anterior part of the middle fossa of the skull on the right side just behind the orbit. The right oculo-motor and abducent nerves passed through the substance of the mass, and just before the point where they entered were characterized by a marked and complete change from

the healthy white appearance of the nerve-tissue to that of translucent gray degeneration. This growth extended backwards to the base of the brain, matting together the corpora quadrigemina, middle cerebral arteries, pituitary body, and optic chiasm; and thence extended along the right fissure of Sylvius. The walls of the arteries were much thickened, and extensive softening was found on the right middle lobe, extending upwards into the corpus striatum from the fissure of Sylvius.

BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES.

MONDAY, APRIL 1, 1872.

DIRECTOR W. S. W. RUSCHENBERGER, M.D., in the chair.

Present, Messrs. J. G. Hunt, I. Norris, Humphrey, Pierce, Tyson, Shaeffer, McQuillen, W. Hunt, Trueman, Betts, Corlies, Walmsley, Buckingham, Allen, and Richardson.

Visitors, Dr. J. E. Garretson, Mr. Holman.

Dr. J. GIBBONS HUNT made an interesting verbal communication upon "The Preparation and Preservation of Tissues," in the course of which he remarked that he had of late quite discarded the use of glycerine, and the terebinthinate media, for mounting such objects, in favor of watery solutions of low specific gravity, and, as evidencing the superiority of aqueous fluids, exhibited a specimen of *Aspergillus* which he maintained could only be seen as thus prepared; no gradual condensation of a heavier liquid, such as glycerine or balsam, being sufficient to answer the purpose. Dr. Hunt stated that any extremely delicate cell-walls are most clearly visible when mapped out by carmine or aniline solution, and this staining, if done with care, may be accomplished without any other alteration of the tissue whatsoever. The green portion of plants cannot be satisfactorily preserved in alcoholic liquids, because spirit of wine dissolves chlorophyll, but the verdant hue may be admirably imitated by staining with a solution of indigo aniline, to which a few drops of tincture of picric acid have been added.

The speaker here exhibited a specimen of *Sphagnum* from Washington, mounted in balsam, which he said showed almost nothing, whilst a similar preparation mounted in a watery solution displayed every detail of its structure.

In regard to animal tissues, Dr. Hunt observed that epithelial cells and sections of mucous membrane can hardly be seen at all when mounted in balsam, but when preserved in an aqueous fluid of low specific gravity, show to great advantage; and mentioned further, in reference to staining animal structure, that he had found that a neutral solution of carmine, prepared according to the formula of Rollett, enabled us to display, in muscle for example, not only nuclei but also well-defined cell-walls.

In conclusion, the doctor called the attention of members to an ingenious slide, invented by Mr. D. S. Holman, Actuary of the Franklin Institute, for exhibiting infusoria, especially under the gas microscope.

These slides, he remarked, are indispensable to the working microscopist. They are made by grinding a deep depression in a thick slide, and then making a very shallow circle all round the deeper central cavity. If the central depression be filled with the organization in water which we desire to study, and covered with a thin glass, in a short time the shallow circle all round the margin will be filled with minute objects, often zoospores or other products in the life-history of the object in the deeper cell. The pressure of the atmosphere retains the cover in position.

Dr. Hunt also exhibited a very convenient lamp attached to the board upon which his microscope stood, so as to allow of both being moved or even passed around a table together, without disturbing the perfection of illumination obtained for any particular object under examination.

Dr. JAMES TYSON observed that he had had a good deal of experience in mounting animal tissues, and believed that the principle as enunciated by Dr. Hunt of preserving them in aqueous solutions of similar specific gravity to those which normally bathe their surfaces was the true one. He had that

very day found two of his valuable specimens, mounted a couple of years ago in the old-fashioned way, so deteriorated as to be almost worthless.

On invitation of the Director, Mr. HOLMAN remarked that by means of his cell (as exhibited by Dr. Hunt), he had kept a vinegar eel locked up for six weeks in a small groove around a bubble of air; also that he had found the minute infusoria always make their way very eagerly to the air-line, and will congregate around air-bubbles, where rotifers, for example, could be seen to break up apparently into multitudes of smaller organisms. This cell also possessed a great advantage in enabling us to keep a small animal alive even for five minutes whilst exhibiting it through the gas microscope, because the greater bulk of fluid it will contain, requires a much longer time to become heated to a temperature fatal to the living organism under examination.

In reply to a question from Dr. Tyson, Mr. HOLMAN stated that the slides now on the tables had been made according to his instructions by Mr. Weist at a cost of \$1.50 each.

Dr. HUNT suggested that the cost might be much diminished by omitting to polish the deeper concavity, which it was not at all necessary to have transparent.

Mr. HOLMAN answered that it was in his opinion an important advantage to have both excavations polished, because otherwise it was difficult to keep the slide perfectly clean.

Dr. ISAAC NORRIS remarked that polishing the deeper excavation was also useful on account of its enabling us to reverse the slide and examine as occasion required, with a low power, organisms which had retreated to the bottom of the fluid.

Dr. TYSON inquired what cement could be depended upon to confine these watery solutions.

Mr. WM. H. WALMSLEY observed that his new form of cement, made without any balsam, but composed of equal parts of gum damar and mastic dissolved in benzole, and thickened with white zinc ground in oil (not dry), did not leak, and was not liable to crack off the glass.

Dr. HUNT said that the damar cement was a useful one, but even with it the specimen must be mounted carefully, or no satisfactory result could be attained.

Dr. JOS. G. RICHARDSON remarked that some specimens of human red blood-corpuscles, which he had mounted more than six months ago in a saturated solution of acetate of potash, were still in a good state of preservation, and inquired of Dr. Hunt whether in his experience this medium was not much more satisfactory than glycerine as a preservative agent.

Dr. HUNT admitted in reply that the acetate of potash solution was less objectionable than other dense fluids.

Dr. TYSON asked Dr. Hunt what steps he took to get rid of the excess of liquid around the margins of the cover.

Dr. HUNT answered that he had never been troubled with any difficulty of the kind suggested by Dr. Tyson, because if a thin layer of cement was applied to the surface of the cell just before putting on the glass cover, a complete sealing up of the object in its preservative fluid was at once accomplished, and any superfluous liquid could be gently washed off by means of a camel's-hair brush dipped in water before the external cementing ring was laid on.

Dr. TYSON remarked that it was in regard to mounting specimens which practical histologists meet with in ordinary examinations and cannot easily transfer to previously prepared cells that he was anxious to obtain information.

Mr. WALMSLEY suggested that just as there was no royal road to the hill of learning, so there was no presidential path to the mounting of specimens, and that the only way to gain success was by learning to perform carefully and thoroughly each step of the process.

Dr. TYSON inquired of Dr. Hunt whether he had ever been able to preserve specimens in solution of acetate of potash without the use of cells.

Dr. HUNT said he was not sure that either glycerine or solution of acetate of potash would allow permanent mounting except by employing a carefully prepared cell. He was desirous, however, that other members who had not yet spoken should give their experience, and begged leave to request the chair to call upon Dr. McQuillen for a contribution to the general fund of information.

Dr. J. H. MCQUILLEN remarked that his observations accorded in the main with those of Dr. Hunt, except that he

was inclined to endorse in part the high estimate Dr. Lionel S. Beale placed upon glycerine as a preservative medium. When used in well-arranged cells he had found no such difficulty as that referred to by Dr. Tyson, some of his specimens of *trichina spiralis*, for example, remaining in perfect order for over two years.

Dr. TYSON observed that the difficulty he had met with was in manipulating thin tissues requiring compression, and those also which were of too great tenuity to admit the use of a cell when examined with high powers.

Dr. HUNT stated that he had in his collection a specimen of tessellated epithelium, which, although mounted in a cell, could be well shown with a $\frac{1}{30}$ th inch objective giving with the deep eye-piece a power of 2000 diameters.

Dr. RICHARDSON said that for examination with high powers ($\frac{1}{25}$ th and $\frac{1}{30}$ th) he had been accustomed to mount specimens in glycerine or acetate of potash solution without the employment of cells, by applying, in the usual mode, a small drop of the preservative fluid at the right and left lateral borders of the cover, and at once dotting the upper and lower margins of the same with zinc-white cement, so as to fix it securely in position; then, after twenty-four hours, when the solution had completely penetrated beneath the thin glass, there was no difficulty in wiping off the excess of liquid with a cloth slightly moistened in water, and afterwards securing the whole by a ring of cement, thrown around it upon a turn-table, in the ordinary way.

In reply to a question from the Chair, Mr. WALMSLEY stated that Bell's cement was reported to be composed of gum shellac dissolved in absolute alcohol and colored with dragon's blood.

Dr. HUNT remarked that he had not been able to succeed in preparing a good cement by this formula, and that another member of the section, Mr. Charles Bullock, had tried many experiments in regard to dissolving shellac in alcohol, without satisfactory result.

Dr. TYSON observed that he had found ether useful for thinning Bell's cement, and mentioned that he had been so well pleased with this compound that he had of late employed it exclusively in his preparations.

Dr. MCQUILLEN asked if Dr. Hunt had mounted sections of bone or teeth in anything but balsam and glycerine, both of which gave, he thought, such erroneous ideas of the lacunæ.

Dr. HUNT replied that he quite agreed with Dr. McQuillen as to the unsatisfactory nature of these menstrua for mounting sections of these structures, since in them the lacunæ of the former became almost invisible to ordinary research, and could only be brought fairly into view by a trick of illumination. He believed his plan of using watery solutions of low specific gravity gave much better results.

Dr. W. S. W. RUSCHENBERGER inquired whether any of the members present had experimented upon the mounting of blood-corpuscles in a solution of hypophosphate of soda, and, in reply to a question from Dr. Hunt, said that he believed Dr. Paul B. Goddard, who first suggested the method to him, was accustomed to use a solution of about the specific gravity of normal blood serum.

Dr. HUNT remarked that he thought we should be very cautious about drawing deductions from the aspects of animal tissues as ordinarily examined, since the fact is we know nothing whatever about life and living processes, and that all our so-called histological investigations are really pathological ones.

Dr. TYSON observed the circumstance, for example, that a corpuscle, as seen circulating in the web of a frog's foot, was so similar in all its visible characters to those examined after they had been drawn upon a slide, that he could not think any marked alteration took place soon after leaving the vessels.

Dr. RICHARDSON mentioned that a statement appeared some months since in several of the medical journals to the effect that the nucleus in the frog's red blood-corpuscle was a post-mortem change; and asked Dr. Tyson whether he had ever noticed such an appearance in red disks which were still within the capillaries of the animal.

Dr. TYSON said that although he believed nuclei were visible under such circumstances, yet he could not distinctly recollect having seen one in a circulating red blood-corpuscle, and indeed had been struck with the frequent absence of nuclei in the corpuscles of freshly-drawn frog's blood.

REVIEWS AND BOOK NOTICES.

PLAIN TALK ABOUT INSANITY. By T. W. FISHER, M.D. Boston. 8vo, pp. 97.

This little book is well fitted to enlighten the non-professional public on some very important points connected with insanity and the insane. That there is need enough of it, the countless bugaboos that possess the public mind on this subject show only too clearly. Common as insanity is, important as its consequences are, reaching even to unborn generations, it is pre-eminently the disease in which the mischief accomplished by ignorance and prejudice is witnessed. And curiously enough, by a sort of practical paradox, this mischief has been steadily increasing with the increase of knowledge generally. It illustrates the characteristic tendency of our times, when people read and listen to be amused or excited, and derive their notions on a matter of science from novels, plays, and newspapers. The prospect would be less discouraging if the evil in question were confined to the ignorant and thoughtless; but it is a lamentable fact that on the cultivated and thinking classes the advances that have been made within the present century in the knowledge of mental disease have made comparatively little impression.

Such books as this we welcome with peculiar satisfaction, for they seem more likely than any other agency to meet the prevalent errors. Dr. F. is fitted for his task by having been for several years assistant-physician in the Boston Hospital for the Insane, and by a large consulting practice subsequently. We cannot better indicate the scope and character of the work than by giving the titles of the chapters, which are "Causes of Insanity," "Forms of Insanity," "Symptoms of Insanity," "Partial Insanity," "Monomania," "Medical Treatment of Insanity," "Moral Management of the Insane," "Home Treatment of the Insane," "Hospital Treatment for the Insane," "Hospitals and Asylums for the Insane," "Medico-Legal Aspect of Insanity." Much of his materials has been supplied by the author's own observations, but he has made a judicious use of the thoughts of others. It has evidently been his design to furnish the kind and amount of information which should be possessed by every one making any pretension to intelligence. Its effect will be to render the reader better acquainted with the conditions on which his mental health depends, and better qualified to meet those questions concerning insanity which, in one way or another, at some time or other, are forced upon almost every person in the community. Certainly, if its instructions were duly heeded, the long list of incurables would be shortened, and we should be spared some of those scandalous scenes that result from a foolish interference with the well-advised arrangements of others.

Dr. Fisher recognizes the predominant part borne by hereditary cerebral defect in the production of insanity, and not only of insanity, but of various other forms of nervous disease, of intemperance, of vice and crime. It is one of the mysteries of human conduct that men act in violation of well-settled laws of breeding, and then wonder that so much of the stock become subjects of disease or a faulty organization. If they were half as careful in their own unions to breed from healthy, vigorous individuals as they are in regard to their domestic animals, we should have little occasion for hospitals for the insane.

The remarks on home and hospital treatment, if duly heeded, would prevent an incalculable amount of trouble both to the insane and to their friends. What physician is not witness to unnecessary suffering arising from the popular errors on this subject, or the obtruded advice of those whose zeal springs solely from ignorance and prejudice? To one of these self-constituted advisers who persuaded the friends to keep at home, instead of sending to a hospital, a desperately suicidal young woman who cut her throat the next day, her medical attendant justly exclaimed, "You, you are the real murderer." The relative advantages of home and of hospital management are clearly set forth. The former is proper enough where only nursing and medical treatment are required, but the latter is indispensable in the case of one who needs constant restraint, moral or mechanical. "Here are combined the restraining influences of new surroundings, new acquaint-

ances and modes of life, a habit of acquiescence in the physician's authority on the part of all, sane and insane; and a routine which carries the patient along insensibly in a prescribed course." Besides, the brain in insanity needs rest, as much as a broken limb, and, as Dr. F. quaintly puts it, "to some the hospital is, for the time, a mental fracture-box and splint."

The routine prescriptions in which our medical brethren are so apt to indulge are effectually disposed of in a few curt sentences, which we quote for their benefit: "Travel is too often recommended indiscriminately in all forms and every stage of mental disease. It is advised when the patient is unable to respond to its pleasant excitation by reason of his mental preoccupation, and when he needs, rather, quiet and medical attention. Nothing is more sad than to see a forlorn and dispirited patient dragged from city to city, or crossing the sea and enduring all the fatigue and annoyance of foreign sight-seeing, in search of that rest and peace of mind which he could have found in a few weeks at the nearest hospital. Another fashionable prescription is 'quiet and country air,' which, being good things in their way, are too often thought to have a specific influence in the cure of mental disease. . . . Too often the patient takes the responsibility of his own case with him, is thrown on his own resources, and lacks the moral support he might find in other surroundings. The ennui of country life is often insupportable, and tends to increase the existing depression." More truth has been seldom contained within so small a compass.

A large part of the book is devoted to the medico-legal relations of insanity, and very "plain talk" it is, and need enough of it, too. While the physician will find in it ample material for instruction and guidance, the public may learn, if it pleases, many a useful lesson respecting its duties to the insane. Our limits forbid more than a glance at one of the various points considered by Dr. F. with singular force and clearness,—and that is the removal of patients to hospitals. On this subject there exists in the community a state of ignorance, prejudice, distrust, and bad feeling, disastrous to all parties concerned, and discreditable to modern civilization. Once it was universally supposed that the friends would treat the patient as discreetly and tenderly as if his disease were a fever or consumption, instead of insanity. But the times and the manners have changed. Now, it seems as if every patient in a hospital for the insane is to be regarded as presumptively sane, while every device of the law, all manner of deceit and false-witness, every sort of clap-trap and popular clamor are to be invoked to procure his discharge and punish the authors of the wrong. The result of this state of feeling is that friends are deterred from resorting to the hospital until it is too late, and physicians shrink from a duty which may be followed by vindictive pains and penalties. Who has not witnessed the original of the following picture so truthfully sketched in these pages?—"Take, for instance, a man who, up to middle life, has been temperate, industrious, a kind father and husband, and a successful business-man. By degrees a naturally quick temper becomes uncontrollable. It involves him in difficulties which react upon him and increase and develop an hereditary tendency to disease. In a few years his character has decidedly changed, his amiable traits have disappeared, and all his bad qualities have grown upon him. He may or may not have taken to drink. His abuse has driven away his children, alienated his friends, and made his wife sick and wretched. His home is ruined, his property melted away in fruitless law-suits and damages for assaults. At last, in sheer self-defence, his wife attempts to secure his custody in a hospital for the insane. A few business friends, his lawyer and others, in a meddlesome spirit of philanthropy, rally around him, and denounce the attempt as an outrage. He has money, self-control, influence, business momentum to carry him on; his wife nothing, and, still worse, has to contend with a real love for her husband as he was, and a fear of his often-threatened revenge if she is successful. Physicians bold enough to help her, do it at the risk of prosecution, and without hope of reward." If it had been added that before the final step were taken, some fearful act of violence was committed, the sketch would have been still true to life.

In one of the newspapers of this city there appeared, the other day, an editorial paragraph respecting the class of cases,

which have been so numerous of late, of homicides committed by insane people, in which it was seriously inquired why such persons were allowed to go at large. As if for much of this mischief the editor and his kind are not deeply responsible. As if any one of those cases could have been kept in a hospital had his friends, after much tribulation, succeeded in placing him there. A law conceived in iniquity and passed in folly would have enabled him to communicate with every lawyer in the State; the great writ which our simple fathers believed to be only a great instrument for furthering the ends of justice, would have brought him before a court; a story in which the kindness, forbearance, and long-suffering of parents, children, brother and sister, and their judicious well-advised measures for his welfare are perverted into damning proofs of cruelty, greed, and oppression, would have procured his discharge, and straightway there would have arisen from the newspaper press throughout the whole length and breadth of the land a shout of triumph over the failure of a scheme of high-handed villany. How long is it since, in this city, a man as clearly and thoroughly insane as any inmate of the Pennsylvania Hospital—who had quit his business, squandered his property, and threatened violence to his family—brought his case before a jury, who virtually declared by their verdict, not that he had recovered, but that he never had been insane? The briefest notice of all the cases of this kind which have been brought to prominent notice within the last three or four years would fill many columns of the *Medical Times*. And yet surprise is expressed because crazy people are suffered to go at large to maim or kill at the prompting of their delusions or their frenzy.

We should like to touch upon other aspects of this subject as presented by Dr. Fisher, but our limits forbid. But we trust enough has been said to convince our medical readers that this book, though ostensibly addressed to the general public, will be found by them profitable for doctrine, for correction, and for instruction.

THE TRANSACTIONS OF THE SECOND ANNUAL SESSION OF THE MEDICAL SOCIETY OF VIRGINIA, OCTOBER, 1871.

This volume of transactions contains some papers of sterling merit. A Report on the Cattle-Disease, by Frederick Horner, Jr., M.D., of Fauquier County, Virginia, is of interest to medical men. From this paper we glean that, in all countries where the subject has been scientifically investigated,—viz., France, England, Russia, Holland, and the United States,—the disease is evidently one of true blood-poisoning. Whether the poison or virus is an effluvium, or is taken into the stomach with the food and water, or is the *Ixodes reticulatus*, or tick which infests the skin of Texas cattle, observation and the microscope have yet to decide. The greatest danger arises from watering in stagnant pools after infected stock, in hot weather, and overcrowding cattle on the cars. Cattle merely driven across the commons where Texas cattle have grazed have sickened and died. In proof of the danger arising from introducing the meat of such animals into the system, the writer recalls the fact that, while stationed at Buenos Ayres on board of a naval vessel, the crew were made the subjects of a distressing dysentery by eating the flesh of cattle that had been overdriven. Dr. Horner warns the epicure whose palate will only be satisfied with blood-gravy and half-cooked meat against the contaminations existing in the diseased hog and Texas cattle. He recommends inoculation of cattle according to the method proposed by Flint in his work on "Milch Cows and Dairy Farming."

In the so-called hog- and chicken-"cholera," the symptoms of the latter disease this observer found to be invariably absent. In the hog the disease seemed to be a low form of fever, in which the liver, lungs, and bowels became congested, inflamed, and ulcerated. In many instances the liver was covered with cysts filled with serum. Buckle, in his "History of Civilization," truly declares that until the diseases of animals are included in the studies of the pathologist, his conclusions will be little better than empirical, on account of the narrowness of the field from which his facts have been gathered; and with this in mind, all researches of the kind set forth in Dr. Horner's paper should be welcomed by the profession.

Another good paper in this volume is an essay on "Dysmenorrhœa," by Dr. John H. Claiborne, of Petersburg. The

author, not forgetting that this affection, like dropsy, is a symptom of disease, and not a disease itself, attacks the theory of Dr. Sims that there is no such thing as constitutional dysmenorrhœa; and that there can be no dysmenorrhœa if the canal of the neck of the womb be straight, and large enough to permit the free passage of the menstrual blood. While granting that obstruction may be, and often is, an agent in this affection, Dr. Claiborne ascribes to neuralgia, the rheumatic diathesis, and engorgement of the womb and ovaries, their abundant share in its production, even though the uterine canal may be freely and thoroughly open. In this view he is supported by Bennett and Scanzoni,—the former teaching that menstruation may be acutely painful without impediment existing of any kind; and the latter, in his treatise upon the diseases of women, not including mechanical obstruction at all as one of the causes of this disorder. Dr. C. also supports his statements by well-drawn notes of four interesting cases. Rest before the expected menstrual period, emollient vaginal injections, anodynes, and the free use of antiphlogistics and counter-irritants, have done more for him than the dilator, the sponge tent, and the hysterotomy.

It is somewhat a matter of wonder that a man of the evident ability of Dr. Claiborne, after writing a scientific paper, should so thoroughly undermine its structure with a silly and impolitic foot-note. Referring to his last case of dysmenorrhœa, caused by mental emotion,—*i.e.* unrequited affection,—he says, "If the hero of this story be inquired after, I will say that he still lives,—that in the late internecine war he played no unimportant rôle,—and that he has fully illustrated the treachery of which these lines have shown him capable, by selling self, and soul, and section, for Federal place." *Verbum sat sapienti!*

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF NEW JERSEY, 1871.

An interesting essay upon the "Sphygmograph and its Relations to Circulatory Physiology," by Dr. E. Holden, of Newark, appears in this volume. Dr. Holden devised an artificial heart and capillary apparatus, made of rubber, with a large sphygmograph two feet in length to record its workings. In addition to this, many interesting observations were made with an inch rubber hose, connected with a steam-engine; a lever six feet in length, connected with the sphygmograph, its distal extremity resting upon the hose, produced tracings which were varied by obstructing the orifice of delivery, interposing dilatations or constrictions in the tube, etc. Finally, a large number of these experiments were made upon the human subject. Dr. Holden claims an improvement in his apparatus over that of Marey in the arrangement of the pen for tracing the movements of the lever. In the first place, the pen is pivoted, thus requiring the paper and not the tracer to support its weight. Another improvement is based upon the fact that a cone made to impinge against a flexible lever will move it a distance proportionate to the angle made by the periphery of the cone with its axis. In other words, the lever that rests upon the pulse has its distal extremity conoidal and bent into an inclined plane, which impinges upon another straight and very light lever carrying the pen; and by this arrangement friction is obviated and the movements of the artery are recorded in tracings upon the paper.

Dr. Holden in the body of his article makes this lucid comparative illustration of the working of his apparatus: "Let us study," says he, "the pulse-tracings from a rational common-sense stand-point. Suppose we have before us the hose of the ordinary fire-engine as constructed in its primitive days, before the alternate pumps were devised, and when, as a consequence, the stream of water thrown was perceptibly intermittent. The tube, from the instant the piston has ceased to descend and the volume of water has been forced through it, begins to collapse with a rapidity proportioned to the size of the delivery-pipe. When the second stroke comes, the flattening hose swells, and the hand or lever placed upon it is raised. Now, if the impulse has been sudden and of short duration, and the delivery be unobstructed, the lever is raised vertically, and instantly descends, so that a pencil at the end would describe merely an ascending and descending line in the same plane; but if a paper to record the pencilling be moved evenly along, the rise and fall of the lever would give a cone-shaped tracing. Should, however, the fulness be prolonged either by the pro-

longation of the impulse or by some obstruction immediately in front of the point of observation, the lever would remain raised as the paper moved along, and the wedge would be flattened at the top. If the force exercised had been very sudden, the tube, if at all elastic, would have been a little more than filled,—*i.e.* distended,—and the lever would fall back a trifle before entering upon the plane. If the regurgitation had been more distant and the stroke of the pump slow, a regurgitant wave would have resulted that would have had a point of commencement in the downward line proportioned to the time that should have elapsed after the subsidence of impulse and the distance of the obstruction." The writer claims that all these features will be found in observation upon the human circulatory apparatus,—not forgetting that the tube, instead of terminating in a single delivery-pipe, divides and subdivides into numerous branches, the united calibre of which slightly exceeds that of the main tubes.

Dicrotism is said to arise simply from the fact that the capillaries are peculiarly elastic, their dilatability and elasticity being increased as their calibre diminishes. Each impulse, therefore, transmitted through them, produces, however briefly, a dilatation,—an over-fulness,—which reacts upon the contained current to produce a superficial retardation, such as is seen along the banks of a running stream. Obstruction, therefore, the author does not believe to be the usual cause of dicrotism; neither can it exist if the propulsive power be weak or the amount of blood unduly great.

A great many diagrams follow, illustrative of mitral and aortic regurgitation, etc. Whether the minute shades of difference in these curves shall ever become significant depends, of course, upon thoroughness and constancy of investigation, as the science is yet in its infancy.

In these Transactions Dr. Forman reports a case of strychnia-poisoning. A lady fifty years of age had been taking, as a tonic, iron, quinia, and strychnia (the latter in doses of $\frac{1}{32}$ of a grain), for several weeks. The strychnia was gradually increased to gr. $\frac{1}{16}$ t. d. The fourth day after the increased dose, violent tetanic spasms supervened, affecting the respiratory muscles to such an extent that asphyxia was imminent. During these convulsions, which occurred in rapid succession, there was intense pain in the legs, neck, and lower portion of the spine. Formication and inability to move the lower extremities occurred during the intermissions. The pulse was 80, and the intellect unimpaired.

Ten minims of Magendie's solution of morphia were injected into her arm, and thirty drops of chloroform in an ounce of whiskey given by the mouth. In half an hour afterwards convulsive action was confined mostly to the limbs. Fifteen minims of Magendie's solution of morphia were now hypodermically administered. Two hours and a half afterwards, twenty grains of chloral were given. The patient then slept for two hours, when the dose of chloral was repeated. The patient recovered. The history of the case would lead us to infer that strychnia (though given in solution), like digitalis and some other potent remedies, sometimes exercises a cumulative effect.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF WEST VIRGINIA, 1871.

Dr. Henry J. Wiesel, of Wheeling, reports five cases of trichinosis,—the first cases of the kind that had made their appearance in West Virginia. On the 4th of March five persons ate some raw smoked ham at supper. We select the clinical career of one to illustrate the sickness of all. A man aged twenty-eight years, who had partaken of the largest quantity of the ham, was seized two hours afterwards with gripping pains in the stomach, to which various remedies gave no relief; and in two more hours diarrhœa and vomiting set in. The third and fourth days, drawing pains in the limbs came on, which prevented full extension. The fifth and sixth days, profuse lachrymation and photophobia were experienced. On the ninth day red spots appeared under the sclerotic coats of the eyes, and on the twelfth day purple spots on the face and chest. Insomnia, excessive thirst, diarrhœa at the rate of twenty-five stools, and vomiting, were at this time every-day symptoms. The ham was inspected; to all appearances it was healthy, and had been obtained from a well-regulated pork-packing house. A piece of the ham was subjected to micro-

scopical examination. A careful computation revealed about 250,000 parasites to the square inch; and according to this the patient must have swallowed about one million of *Trichinae*. The patient continued to "run down hill" until his weight decreased from 148 to 99 pounds. About the sixty-fifth day his languor began to decrease, the diarrhoea being reduced to three stools a day, and the vomiting entirely checked. After this period he progressed towards rapid convalescence.

The treatment in these cases was devoted to allaying irritation of the bowels and stomach, relieving abdominal and muscular pain, overcoming debility, and imparting rest. A light nutritious diet, brandy, buttermilk (which seemed particularly palatable), injections of sulphate of iron in starch-water, and by the mouth lime-water, creasote, opiates, hydrate of chloral, quinine, and iron. The limbs were packed in solution of carbolie acid. Chlorine-water—one drachm every two hours—was commenced after the forty-fifth day, and seemed to exercise a beneficial influence.

In the works of Pagenstecher, Virchow, and Leuckhardt may be found all that is known of the history, pathology, and treatment of this disease.

BOOKS AND PAMPHLETS RECEIVED.

Injuries of Nerves and their Consequences. By S. Weir Mitchell, M.D., Member of the National Academy of Sciences, Physician to the Philadelphia Orthopedic Hospital and Infirmary for Diseases of the Nervous System. 8vo, pp. 377. Philadelphia, J. B. Lippincott & Co., 1872.

History of Medicine from the Earliest Ages to the Commencement of the Nineteenth Century. By Robley Dunglison, M.D., LL.D., late Professor of the Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College of Philadelphia, etc. etc. Arranged and Edited by Richard J. Dunglison, M.D. 12mo, pp. 287. Philadelphia, Lindsay & Blakiston, 1872.

The Urine and its Derangements,—with the Application of Physiological Chemistry to the Diagnosis and Treatment of Constitutional as well as Local Diseases; being a Course of Original Lectures delivered at University College, London. By George Harley, M.D., F.R.S., etc. With Illustrations. 12mo, pp. 334. Philadelphia, Lindsay & Blakiston, 1872.

Worms. A Series of Lectures on Practical Helminthology, delivered at the Medical College of the Middlesex Hospital. With Cases illustrating the Symptoms, Diagnosis, and Treatment of Internal Parasitic Diseases. By T. Spencer Cobbold, M.D., F.R.S., etc. 12mo, pp. 178. Philadelphia, Lindsay & Blakiston, 1872.

The Irritable Bladder—its Causes and Treatment; including a Practical View of Urinary Pathology, Deposits, and Calculi. By Frederick James Gant, F.R.C.S., Surgeon to the Royal Free Hospital. Third Edition, Revised and Enlarged, with additional Wood Engravings. 12mo, pp. 221. Philadelphia, Lindsay & Blakiston, 1872.

Memoranda on Poisons. By the late Thomas Hawkes Tanner, M.D., F.L.S. Third and Completely Revised Edition. 18mo, pp. 155. Philadelphia, Lindsay & Blakiston, 1872.

Dr. Rigby's Obstetric Memoranda. Fourth Edition, Revised and Enlarged. By Alfred Meadows, M.D., author of "A Manual of Midwifery," etc. 18mo, pp. 104. Philadelphia, Lindsay & Blakiston, 1872.

Trial of Mrs. Elizabeth G. Wharton on the Charge of Poisoning General W. S. Ketchum. Reported and Published by the *Baltimore Gazette*.

An Investigation concerning the Mechanism of the Ossicles of Hearing and the Membrane of the Round Window. By Charles H. Burnett, M.D., Aural Surgeon to the Philadelphia Dispensary, etc.

Fourth Annual Report of the Board of Managers of the Philadelphia Orthopedic Hospital for the Treatment of Bodily Deformities and Diseases of the Nervous System.

Lectures on Aural Catarrh; or, The Commonest Forms of Deafness and their Cure. By Peter Allen, M.D., F.R.C.S., etc. 12mo, pp. 277. New York, Wm. Wood & Co., 1872.

Lithotomy and Lithotripsy illustrated by Cases in the Practice of Gurdon Buck, M.D., Visiting-Surgeon to the New York Hospital and Presbyterian Hospital, etc. Pamphlet. Wm. Wood & Co., 1872.

The Treatment of Venereal Diseases: a Monograph on the Method pursued in the Vienna Hospital under the Direction of Prof. Von Sigmund; including all the Formulæ. By M. H. Henry, M.D., Surgeon to the New York Dispensary, —Department of Venereal and Skin Diseases,—etc. Adapted and arranged from the German. 8vo, pp. 49. New York, Wm. Wood & Co., 1872.

The Physiological and Therapeutical Action of the Bromide of Potassium and Bromide of Ammonium. By Edward H. Clarke, M.D., and Robert Amory, M.D. 8vo, pp. 178. Boston, James Campbell, 1872.

GLEANINGS FROM OUR EXCHANGES.

THE CAUSE OF ASTHMA.—Professor E. Leyden, of Königsberg, reports, in *Virchow's Archives* for March 15, five cases of asthma in which careful examinations of the sputa during the paroxysms were made. These contained roundish bodies of the size of a millet-seed, which under the microscope were found to consist of densely-crowded, round, granular cells, as large as mucous corpuscles, and of delicate crystals. The latter were colorless, having very little lustre, and octahedral in shape. They varied in size, some being large enough to be detected by the unaided eye; others could only be seen when a microscopic examination of the sputa was made. They were very fragile, being readily broken by the slightest pressure. Similar crystals have been found by Robin, Charcot, and Neumann in spleens removed from the bodies of patients who had died of leukæmia, and by Wagner in the portal blood of a puerperal woman. They are not dissolved by cold water, alcohol, ether, or chloroform, and very slowly by ammonia, but are readily soluble in warm water, acetic, tartaric, and phosphoric acids. Concentrated sulphuric and muriatic acids produce a hook-like bending of the ends of the crystals.

Prof. Leyden holds that these crystals are the cause of the paroxysms which occur in asthmatic patients, believing that, in consequence of the irritation of the bronchial mucous membrane which they produce, spasm of the muscles of the bronchial tubes is produced,—exactly what takes place when irritating vapors or substances are inhaled. He proposes that, during paroxysms of asthma, the patient should inhale a solution of chloride of sodium and carbonate of soda, by which he thinks these crystals will be dissolved and their formation in the bronchial tubes prevented.

LARYNGISMUS STRIDULUS.—Dr. A. Hauner (*Journal für Kinderkrankheiten*, January and February), in the many autopsies which he has made of children dying of Laryngismus stridulus, has not found a constant lesion of the larynx or of any other part of the body. He therefore believes the disease to be a neurosis arising from some alteration of the brain, medulla oblongata, or peripheral nerves. Some of the symptoms resemble those produced in animals by section of the medulla oblongata. He has found no treatment positively curative, but recommends the administration of a few drops of a tincture of musk and amber.

THE INFLUENCE OF THE SYPHILITIC DIATHESIS UPON WOUNDS.—The conclusions of Dr. Merkel (*Archives Générales*, March, 1872; from *Centralblatt*, 1871, 4) are as follows: 1. Syphilis usually has no effect upon the natural course of wounds. 2. If, however, the infection has taken place only a short time before the wound, manifestations of the diathesis may sometimes occur. 3. Wounds, even when serious, as those involving articulations or those accompanied by inflammation of the deep tissues, are not generally influenced by the existence of syphilis. 4. The manifestations of syphilis

consequent upon wounds are almost always cutaneous, and are observed immediately around the cicatrix or on the parts of the skin which are their usual seat.

THE EXTRACT OF CONIUM IN GATHERED-BREAST.—Dr. Carl J. Stadler calls attention (*Wiener Medizinische Presse*, March 24, 1872) to the extract of conium in cases where abscess of the mammary gland is threatened. He recommends that half a grain of it should be given four times daily. To be of service, the treatment must be begun early.

PECULIAR TREATMENT OF SYPHILITIC IRITIS.—Dr. De Magri, of Milan (*Lancet*, March 23; from the *Giornale delle Mal. Veneree*, February, 1872) has treated a number of cases of this kind by injecting calomel into the left arm. He usually injects six grains of calomel, suspended in glycerine; an abscess, mostly connected with sloughing, forms, and the eye instantly improves. Atropia is, however, freely instilled into the latter, but the improvement is attributed to the powerful counter-irritation exerted in the arm. Even cases of pannus and scrofulous keratitis are thus treated, and with equal success.

MISCELLANY.

PROF. DICKSON'S SUCCESSOR.—Dr. J. M. DaCosta has been elected Professor of the Theory and Practice of Medicine in the Jefferson Medical College of this city,—a selection which will gratify not only his numerous friends, but those of the College.

RESIGNATIONS.—Dr. James Tyson has resigned his position as Attending Surgeon to St. Joseph's Hospital, also that as Chief of the Medical Clinic at the University of Pennsylvania.

Dr. Richard J. Dunglison has resigned his position as Attending Physician to the Pennsylvania Institution for the Blind, which he has held for the last twelve years, in order to devote himself exclusively to literary labor.

THE Medical Faculty of the University of Pennsylvania have appointed Professors Joseph Leidy and Robert E. Rogers delegates to the American Medical Association.

CHANGES IN BELLEVUE HOSPITAL MEDICAL COLLEGE.—We are informed by the *New York Medical Journal* that the following important changes have taken place in the Faculty of this College: Prof. B. W. McCreedy having resigned, Prof. W. A. Hammond will assume the chair of Materia Medica and Therapeutics and Clinical Medicine, in addition to that of Diseases of the Mind and Nervous System. On the latter branches he will continue his lectures and clinics as heretofore. In consequence of the resignation of Prof. Stephen Smith, Dr. A. B. Crosby has been appointed Professor of Descriptive and Surgical Anatomy. Dr. E. G. Janeway has been made Professor of Pathological Anatomy. Dr. E. L. Keyes has been appointed Professor of Dermatology.

UNIVERSITY MEDICAL COLLEGE, NEW YORK.—Dr. Joseph W. Howe has been appointed Clinical Professor of Surgery; Dr. Henry S. Hewit, Professor of Clinical Surgery; Dr. Arnold, Professor of Pathological Anatomy; and Dr. Kammerer, Professor of Diseases of Women and Children, *vice* Dr. F. D. Lente, resigned.

SIR ROBERT CHRISTISON.—On the 23d of February this distinguished physician attained his jubilee, having been a Professor of the University of Edinburgh for fifty years,—being about the only Professor of that university who has served so long during the three centuries that it has existed. The event was celebrated by the presentation of a sword of honor by the University Volunteer Rifle Corps, of which

body Sir Robert has been captain since its formation; by the presentation of a congratulatory address from the Edinburgh University Club of London; and by a banquet in the evening.

DEATH OF DR. W. W. GERHARD.—This distinguished physician died at his residence in this city, April 28, 1872, aged sixty-three years.

MORTALITY FROM SMALLPOX.—The number of deaths from smallpox in Philadelphia during the weeks ending April 13 and 20, 1872, were respectively 71 and 62, of which 87 were of minors.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending	
	April 13.	April 20.
Consumption	62	50
Other Diseases of Respiratory Organs	76	57
Diseases of Organs of Circulation	13	13
Diseases of Brain and Nervous System	64	58
Diseases of the Digestive Organs	28	26
Diseases of the Genito-Urinary Organs	6	4
Zymotic Diseases	103	87
Cancer	7	9
Casualties	16	7
Debility	39	20
Intemperance	1	3
Malformation	0	2
Murder	2	0
Old Age	10	10
Scrofula	3	2
Stillborn	17	18
Suicide	0	1
Syphilis	1	1
Tetanus	1	1
Tumors	1	0
Unclassifiable	10	13
Unknown	2	1
Totals	462	383
Adults	214	162
Minors	248	221

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM APRIL 5, 1872, TO APRIL 18, 1872, INCLUSIVE.

MILLS, MADISON, SURGEON.—By S. O. 86, War Department, A. G. O., April 11, 1872, granted sixty days' extension of leave of absence.

BAILY, J. C., SURGEON.—By S. O. 48, c. s., Department of California, relieved from duty at the Presidio of San Francisco, and to await further orders there.

McMILLIN, THOS., ASSISTANT-SURGEON.—By S. O. 48, Department of California, April 2, 1872, assigned to duty at the Presidio of San Francisco, Cal.

BREWER, J. W., ASSISTANT-SURGEON.—By S. O. 53, Department of the Missouri, April 3, 1872, assigned to duty at Fort Hacker, Kansas.

MIDDLETON, P., ASSISTANT-SURGEON.—By S. O. 74, Department of the South, April 9, 1872, granted leave of absence for thirty days.

NAVY NEWS.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY SINCE APRIL 6, 1872.

Surgeon G. W. Woods detached from U.S.S. Lackawanna, and ordered to the Naval Hospital, Mare Island, Cal.

Surgeon W. K. Scofield detached from the Vermont, and ordered to the Lackawanna.

P.-A.-Surgeon D. McMurtrie, to the receiving-ship Vermont.

Assistant-Surgeon W. M. Nickerson, to the Navy Yard, New York.

Surgeon Wm. M. King detached from the receiving-ship Sabine, and waiting orders.

P.-A.-Surgeon H. M. Rundlett, to the receiving-ship Sabine.

P.-A.-Surgeon F. M. Dearborne, to the Naval Hospital, Chelsea, Mass.

WEDNESDAY, MAY 15, 1872.

ORIGINAL LECTURES.

ON FIBROID TUMORS OF THE WOMB.

BY WILLIAM GOODELL, M.D.,

Physician in Charge of the Preston Retreat; Clinical Lecturer on the Diseases of Women and Children in the University of Pennsylvania, etc.

LECTURE II.

HITHERTO I have tried to point out the distinctive features of the three kinds of fibroids; but there are certain characteristics common to all. After they have attained the size of a hickory-nut, displacements of the womb follow. By reason of its increased weight, not only will that organ descend bodily in the pelvis, and thus become prolapsed and even procident, but it will also bend over and double up, producing flexions of that aspect on which the growth is seated. Ante-flexion causes hardly more than vesical irritations; but a retroflexed womb, by pressing upon the sacral nerves, the rectum, and the neck of the bladder, gives very great annoyance. Sometimes, as the tumor grows and begins to impinge either upon the sacrum or upon the symphysis pubis, the fundus of the womb is pushed over to the opposite side and the flexion is reversed. Thus, a fibroid nodule in the anterior wall first brings about an ante-flexion, but, its growth in that direction being repelled by the pubic bones, it pushes the fundus of the womb away from the symphysis and tilts it over into Douglas's cul-de-sac. At times the womb is so displaced that its os is with great difficulty reached. In such cases it will be usually found by squeezing the finger well up between the tumor and the pubic symphysis. Some years ago, while residing at Constantinople,—where, luckily for the profession, the sacred number is in high repute,—I made one of seven physicians who were called in to consult together over a tumor of this kind in a Greek maiden lady. In the multitude of counsellors there was wisdom certainly in this case, for, of the seven, only one—and that one was not myself—succeeded in finding the os uteri.

Like the gravid uterus after the fourth month,—but, being solid, by no means so uniformly,—a fibroid, when too large for the pelvic cavity, tends to rise up above the brim, dragging the womb with it. The os will then be found higher up, but hardly ever beyond the reach of the finger. This elevation of the mass is followed by a great mitigation of all those symptoms produced by pressure. Sometimes, however, by neglect it becomes impacted, or else, by the irritation of confinement in the pelvic canal, it inflames and contracts adhesions to surrounding tissues. It cannot now ascend, but soon blocks up the pelvic canal; first crowding upon the neck of the bladder so as to render the introduction of the catheter difficult and even impossible; next, flattening the rectum to a ribbon, and otherwise producing the most formidable symptoms. The reasons why vesical disturbances precede those of the rectum, are that the bladder, being in the conjugate—viz., the shortest—diameter and abutting on the pelves, can hardly escape from being nipped; whereas the rectum not only lies in the oblique diameter and hugs closely the hollow of the sacrum, but also is further protected from pressure by the promontory.

The situation of a fibroid, rather than its size, will often modify the character of the symptoms. Thus, quite a small interstitial one at the internal os makes the cervix crescentic, the fibroid occupying the concavity. In these cases, the stricture thus induced causes sterility and dis-

trressing dysmenorrhœa, and usually the introduction of the sound will be found difficult. One of our patients thus afflicted promised to be here to-day; but she has not kept her word. Those of you who have examined her will recall the case. She is twenty-five years old, four years married, sterile, and was a martyr to agonizing attacks of dysmenorrhœa. I found the womb ante-flexed, as it generally is in virgins and in nulliparous women, and the cervix hook-shaped from a fibroid, not larger than a boy's marble, situated at its junction with the corpus. I never had a case in which the introduction of the sound gave me more trouble; indeed, it was only by straightening out the crooks and turns of the canal by very firm traction on the anterior lip with a tenaculum, that I succeeded at all. I anticipated a great deal of difficulty in treating this case; but, to my agreeable surprise, by dint of a slippery-elm tent, by repeated scarifications of the cervix, which was much congested, and by the local application of a saturated tincture of iodine, she is now greatly relieved.

During the period of menstrual life, nature rarely interferes with these fibroid tumors, and a spontaneous cure is then hardly to be expected. They slowly increase in bulk until the change of life, when they commonly stop growing, and either remain passive, or else begin to shrink, and perhaps disappear. Sometimes, without any explainable cause, arrest of growth or even retrogressive changes will take place long before the change of life. Occasionally a spontaneous cure is brought about by an ulceration of the internal uterine wall over the fibroid, which then either breaks down and comes away in débris and putrilage, or else, by uterine contractions, is shelled out entire from its capsule. Chiefly in the interstitial variety an arrest of growth, and even atrophy, will at times take place by a disorderly deposit of lime, which, by breaking off the vascular filaments of attachment, interferes with the nutrition of the fibroid. A uterine calculus thus formed either remains innocuous in its nidus, or is squeezed out and expelled *per vaginam*,—a phenomenon which greatly puzzled the older anatomists. Here is a womb containing three of these pebbles, each one so hard as to be capable of receiving a fine polish. Observe how loosely each one lies in its bed, and with what ease they could have been pried out. This calcareous degeneration, as a means of cure, is analogous to the cretaceous transformation of pulmonary tubercle. It happens chiefly in old subjects and in the smaller tumors. A calcified fibroid looks as if the calcareous particles were at first deposited at isolated spots, and had afterwards cohered at irregular points of contact. This gives it the rough appearance of a mulberry calculus; but it is much less dense. This calcareous degeneration is not true bone; for it possesses none of the osseous elements, not even cartilage-corpuscle. It is the result of a chemical rather than of a physiological process, and resembles coral in appearance. The false ossifications of the economy—such, for instance, as the ossification of the arteries in old people—all point to enfeebled vitality. By analogy we may, therefore, attribute the cretaceous transformation of fibroids to their low grade of life. But that is not the only assignable reason; another one is, that the womb and its contents are very prone to this curious change of structure. Cases are on record in which the walls of that organ have become incrustated with lime, or even converted into a bony shell. A fetus detained by missed labor has been found petrified; and you will not practise long without meeting with a placenta studded with gritty particles of chalk, sometimes in patches so extensive as to cause the death of the child by impeding the circulation of the blood.

In certain rare cases, uterine tumors primarily fibroid will take on a cystic transformation; in other words, a

solid growth becomes honeycombed with cyst-like cavities, each cyst containing fatty debris and liquefied tissue. These fibro-cystic tumors affect that portion of the corpus uteri which is not covered with peritoneum, although this is not their invariable site. There they grow very rapidly, dissecting up the peritoneum from off the pelvic organs and abdominal walls, and often attain an immense size. From their physical and clinical resemblance to cystic disease of the ovaries, they are of special interest to the ovariologist. Both grow rapidly, and the former give a sense of fluctuation which the most skilled tactus cannot discriminate from that of an ovarian cyst.

There is yet another very interesting termination to these fibroids, which must not be overlooked. During pregnancy they receive more blood, and consequently grow more rapidly, than at other times. Now, trees of slow growth have a tough and hard fibre, which resists atmospheric action; whereas the wood of quick growers is soft, porous, and liable to decay. In like manner these tumors, becoming pulpy and succulent from the rank juices of the gravid womb, present conditions favorable to retrograde metamorphosis. After labor, the uterine contractions so constrict the blood-vessels that the fibroid no longer gets the amount of pabulum necessary for its quickened vitality. It shrivels, and may even disappear, either through simple atrophy, or by a process of involution analogous to that of the parturient womb. Sometimes, bruised by the pressure to which, during the throes of labor, it has been subjected, it breaks down and comes away in grumous and fetid discharges, too often then destroying life by septicæmia.

At this stage of our inquiry an interesting question comes up,—one which your patients will eagerly put, and one which you must therefore be prepared to answer: Does a fibroid ever degenerate into cancer? In good faith you can reply, "Never." The few blood- and lymph-vessels of this growth, its loose attachment to the parenchyma, and its consequently sluggish life, restrict its action, and preclude the possibility of any malignant degeneration. Careless observers, misled by the fact that a fibroid may coexist with a cancer in the same womb, have mistaken coincidence for causation. Or perhaps they have been deceived by the putrid sloughs of a disintegrating tumor. But, with our present light, the doctrine of the convertibility of the former into the latter is untenable.

Step by step I have led you on until the time has come to discuss the physical and the differential diagnosis of this class of tumors. A digital examination *per vaginam* will discover an enlarged womb, with increased weight and diminished mobility. Conjoined with this, external palpation will show that the suprapubic tumor is an integral part of the womb, by the play of the mass between the two hands. In small tumors this bi-manual examination will often prove inefficacious, and in fat women wholly fail. The site of a fibroid and its kind determine the ease with which it may be discovered. Thus, a fibroid is readily discoverable by the rectum or by the vagina if sessile and on the lower segment of the womb. On the other hand, much larger ones may escape detection if intramural or submucous, or if seated higher up towards the fundus. Retroflexion must not be mistaken for a fibroid in the posterior uterine wall. In each there will be a tumor in the interspace between the rectum and the uterus. The direction in which the sound passes, and the ease with which it corrects the displacement, should discriminate between these two conditions. Again, in a retroflexion a sulcus exists between the cervix uteri and the apparent tumor; and, further, the latter, being the fundus of the womb, is tender to the touch. Whereas, if a fibroid, there is not this tenderness, and the cervix, without any inter-

vening fissure, loses itself in a hunch on the back of the womb. I lay stress on this point, because in most of your text-books you will find it stated that this sulcus does not exist in retroflexions; but in my experience its presence is the rule, and its absence the exception. If in a case of apparent retroflexion the concavity of the sound looks anteriorly, there must be present either a fibroid on the posterior wall, a dislocated ovary, an extra-uterine foetation, or, what is very rare, a bifid uterus. The depth to which the sound passes will also greatly aid the diagnosis; for nothing but a tumor—when pregnancy or a hypertrophic elongation of the cervix is not present—can lengthen out the cavity to four, five, or six inches. By the direction which the sound takes, and also by feeling for its tip, either above the pubes or in the rectum, you can tell on which aspect of the uterus the fibroid is growing.

It is not always easy to distinguish a fibroid tumor from the gravid womb. The uterine murmur in each is the same; nausea and vomiting are often present; foetal movements may be imagined; and the areola around the nipple darkens. Other signs of pregnancy are perhaps found, and the physician jumps to that conclusion, overlooking such counterproofs as the hemorrhagic attacks, the absence of moisture and oedema around the nipple, and the lack of the ordinary changes in the lower segment of the pregnant womb. Whenever a fibroid is present, the womb feels hard,—far more so than when gravid; the cervix does not soften down, and is not so continuous in outline with the lower segment of the womb, but projects abruptly, like the nipple on a distended breast. Nor does the vagina become violet in hue; but to this I have seen one marked exception. Further, the pregnant womb grows rapidly, and, when handled, becomes alternately hard and soft; it also shows a distinct outline when irritated into contraction. None of these signs are discoverable in a womb containing a fibroid. Still, in some cases all these rules will fail, and you will have to fall back on time to clear up the diagnosis. In doubtful cases it is always safer to assume the existence of pregnancy until the contrary is proved. On the other hand, do not forget that pregnancy may coexist with a fibroid tumor, and be chary, therefore, in the use of the sound. In the treatment of uterine diseases let me here urge you to adopt this golden rule: *Think twice before you pass the sound.*

Do not mistake a subinvolved or a hypertrophied womb for a fibroid. The history of the case will aid the diagnosis; and further, although menorrhagia may be present, intercurrent hemorrhages will hardly ever be. It may, however, be impossible to discriminate between a subinvolved womb and one which has become wholly fibroid; but the latter is so extremely rare a disease that I either have never met with it, or have failed to recognize it.

An ovarian tumor is usually distinguishable from a fibroid by its fluctuation and rapid growth; by the uterine sound, which will not indicate an enlargement of the uterine cavity; by the absence of menorrhagia, of leucorrhœa, and of uterine souffles and colics. There will be a greater mobility and a higher elevation of the womb, and a less tendency to displacement, than in fibroids; also, the ulnar margin of the hand can be sunk more deeply between the pubes and the tumor, if ovarian. Fibroids begin very rarely indeed before the age of thirty, and never after that of fifty; ovarian tumors are common to all ages after the period of puberty. Colored women—as I have before told you—are extremely obnoxious to fibroids, but very rarely so to cystic disease of the ovaries.

A differential diagnosis between the three varieties of fibroid is often of great importance, but it may not be attainable by the ordinary signs and symptoms; or a

question of intra-uterine polypus comes up. What is the course now to be pursued? Clearly, to explore the uterine cavity with the finger. For this end, the cervical canal must be dilated either by a series of sponge- or of slippery-elm-tents, or else by a fagot of laminaria-tents. But stay! these agents will not always be necessary; for—and pray do not forget this—during the catamenial flux, the increased bulk of the tumor, together with the resulting labor-like pains, so opens up the os uteri as often to permit the passage of the finger into the uterine cavity. Explain this to your patient, else her innate feeling of delicacy will cause her to shrink from an examination at such a time.

In so far as danger to life is concerned, the prognosis of uterine fibroids is on the whole so favorable that you can give honest comfort to your patient. Her days, it is true, may be shortened by exhausting leucorrhœas and hemorrhages; or she may be jaded out by the pain and distress caused by the bulk-pressure which chiefly happens when the tumor is fibro-cystic. But these are, fortunately, exceptional cases; whilst sudden death from the violence of the hemorrhage is extremely rare. Attacks of peritonitis are more common; but even these are generally not fatal, unless they result from child-birth. The nearer the woman to the critical period of life, the more favorable is the prognosis; but remember this important fact: the menses will linger on beyond the usual time. Fibroid tumors, in common with other uterine affections leading to congestion, keep up the ovarian nîsus and greatly prolong the menstrual period of life. To a woman who has passed the climacteric you can hold out hopes not only of a life of comparative comfort, but also of a decline in the size of the tumor.

Pregnancy very greatly enhances the peril of the woman. New dangers, which cannot be glossed over, now confront her. When seated in the lower segment of the womb and in front of the presenting part of the child, a fibroid may render labor difficult, dangerous, or impossible. Besides those arising from obstruction, it may cause other very grave dangers. Wherever seated, the now pulpy and succulent tumor—if of the submucous or interstitial variety—is liable to sustain serious injury from the effects of labor. It may be so bruised as to kindle up a fatal peritonitis, or to break down and give rise to septicæmia. Further, by preventing firm uterine contraction, it may retard the labor, or induce an uncontrollable post-partum hemorrhage. Or the irritation of its presence may goad the womb into exhausting after-pains. The retention of the placenta or of the membranes is another complication very likely to happen in these cases. In two which fell to my care, the uterine cavity was so distorted by the bulging in of a submucous fibroid that, although I succeeded in getting away the placenta, the membranes were torn off and left behind. For fear of bruising the tumor, I did not dare to force my hand into the uterine cavity to remove them; but by the third day they had worked down to the os, and were then coaxed away. In each of these cases, the expulsive pains were so hampered by the presence of the solid body in the uterine wall as to need the aid of the forceps. Both deliveries were followed by alarming flooding, by an exhausting oozing which lasted several days, and by very unruly after-pains. One of the women recovered so perfectly from the immediate effects of labor as to be able to be about the house; but in the fifth week septic symptoms set in, and she died soon after. After death, the tumor was found to have softened down into putrilage. The other woman gave me much anxiety. Her convalescence was slow; her pulse feeble and frequent; she had night-sweats, great prostration, and other symptoms which led me to fear that disintegration had begun; but she finally did well, with the fibroid greatly reduced in bulk.

A few weeks ago I exhibited to the Obstetrical Society of this city a womb containing in its posterior wall a fibroid larger than the ovum at term. It had been removed by my friend Dr. Wm. B. Atkinson from the body of a light-mulatto woman, aged thirty-five, who had died quite suddenly on the tenth day after giving birth to a fully-developed infant. This fibroid must have grown very rapidly during gestation, for previously to her delivery she had not been conscious of its existence. The labor would probably have been tedious had not the feet presented, which enabled the attending physician—Dr. W. F. Patterson—to render early assistance. Curiously enough, there was no post-partum hemorrhage, nor any other complication. Although the tumor had commenced to soften at its centre, death was, I think, due, not to pyæmia, but to puerperal embolism of the pulmonary artery. For, from the very imperfect contraction of the womb,—splinted up as it was by the fibroid,—it is reasonable to suppose that some one of the physiological clots of the unconstricted uterine vessels had become long enough to project into a large vein, where its tip was washed off and swept into the pulmonic circulation.

Do not infer that every kind of uterine fibroid is dangerous to the parturient woman. Repeatedly have I discovered outgrowths on the surface of a recently-delivered womb; but never, to my knowledge, have they given rise to serious symptoms. Being either sessile or pedunculated, they rarely interfere with firm uterine contractions; whilst their position outside of the muscular layer secures them from the gripe of the uterus. It is only when one lodges in the retro-uterine space that it can be squeezed, and then only by pressure from the child's head.

(To be continued.)

ORIGINAL COMMUNICATIONS.

ELECTRO-THERAPEUTICS.

A NEW MODE OF APPLYING THE GALVANIC CURRENT.

BY N. MAYER, M.D.,

Hartford, Conn.

FEW important remedial agents are so much neglected by the profession at large, and so often called into play by empirical and irregular practitioners, as electricity. Perhaps the latter fact may furnish a partial explanation of the former. But it is not alone the bad odor which its employment by charlatans has given to this remedy that makes our private practitioners chary of using it, but a want of knowledge of its precise qualities,—the special symptoms that call for its exhibition,—the manner of application, and the quantity demanded. Almost all well-regulated hospitals use it to some extent; those of London—Guy's at the head—have furnished results that need but to be studied in order to demonstrate its importance in most nervous diseases. On the continent, observations still more accurate and gratifying have been made.

Without treating of the subject at length, I merely desire to call the attention of the profession to the importance of its employment in private practice; this more especially as there have been observed some gratifying results recently from a new way of applying the continuous current in affections of the nerves of the face and head. Of the three kinds of electricity in use,—static electricity, the galvanic current, and faradization or inductive electricity,—faradization is probably most commonly employed. The magneto-electric machines which may be found in every drug-store meet with a

large sale, and—partly countenanced by physicians, partly independently of advice—are used by the public for every chronic nervous affection. The continuous current, which is far more useful in many of these afflictions, finds less favor, unless it is made easy to people, as by galvanic chains, belts, poultices, and apparatus of a similar construction. The continuous galvanic current has produced remedial results of the greatest value. It is applicable to more conditions of nervous disease than the other forms of electricity, and has consequently met with greater success in treatment whenever applied. It is a nerve-tonic. It may be said to act in four different ways. *First*, it regulates the local circulation. Whether it accomplishes this by dilating the blood-vessels of a part, and, if congested, permitting normal circulation to re-establish itself,—catalytically, as one author terms it,—or whether it does it by other influences, is undecided as yet. But the fact stands. *Secondly*, it reduces exalted irritability of muscles, and increases their tone and power of volition; in other words, its effects are antispasmodic. *Thirdly*, it acts anti-paralytically, re-exciting diminished nerve-power and sensibility. It has been supposed that the latter effects may be due to its regulating influence on the circulation of the nerve-centres. *Fourthly*, it restores the systematic current of nerve-electricity to its proper condition. The fact that the most important vital phenomena which occur in a nerve consist of different electrical conditions of the same, is fully established. That these are altered in disease may be safely assumed. And that whatever restores them to a normal condition is of great importance in recovery, seems to be a medical probability.

With a due consideration of these four different manners in which the effects of a continuous current may be of advantage in the treatment of disease, it has long been used by some of the profession.

I desire here to mention a mode of applying the galvanic current which is new and seems to prove very effective. A number of small zinc and platinum disks, separated from each other by bits of cotton cloth which are saturated with very dilute sulphuric acid, form a pile. This is applied to the mastoid process on one side, while a similar pile is applied on the other. The succession in which they are arranged is: first, a zinc disk, then a bit of cloth; a platinum disk, another bit of cloth; zinc, cloth, and platinum, once more. This is applied to one side, the head serving in place of the intervening cloth; and on the other side the pile begins with a zinc disk, and proceeds in regular succession. The piles are held together by a central screw, which connects with a wire or any other conductor passing over or behind the head, to be attached to the screw of the opposite pile. Thus a complete circuit is established, and the galvanic current may be permitted to exert its slight but continuous influence on all the parts of the head intervening between the two piles. It has been modified in size, of late, to such an extent that two little shell cases a half-inch in diameter and an eighth of an inch in depth will contain the Voltaic piles, while the most convenient conductor has been found to consist of a steel spectacle-frame. An optician of this city has manufactured some of these, and has been much gratified by the result. It is not so much the active diseases, or exacerbations of chronic afflictions, in which they can be used. More powerful agents or stronger currents are needed there. But to remedy the predisposition to certain nervous diseases of the face and head, or to do away with their results, they might prove decidedly beneficial. Though appreciable by the electroscope, the current is very weak, and therefore may be used constantly without disadvantage. The conditions in which an electro-tonic agent like the continuous galvanic current might be found advantageous are:

1. Loss of mental energy from imperfect cerebral nutrition.
2. A hypochondriac state of the mind.
3. To satisfy the craving for stimulus in reformed drinkers or opium-eaters.
4. In cerebral paralysis. While the testimony furnished by authors in regard to the benefits derived in the previously-mentioned cases is comparatively slight, it is much stronger as to its efficacy in paralysis, especially when depending on derangements of brain-nutrition. We have a very telling case on record,—that of Dr. Saulsbury, of this State.

Then there are—

- Facial palsy;
- Hemiplegia;
- Severe headache;
- Facial spasm (*tic convulsif*);
- Loss of smell;
- Weakness of sight, from imperfect nutrition;
- Nervous deafness;
- Neuralgia of the face;
- Hemicrania;
- Cervico-occipital neuralgia.

It will be seen that all these are nervous diseases which result from a defective nutrition, a too great irritability, or a depression of vital powers of the nerves or the nerve-centres. The attention of the profession is called to this method of applying the continuous current, in the hope that observations on the same subject may be made by others. A European medical journal, the *Medizinische Central Zeitung*, published at Berlin, had some interesting statements last summer of the experiments made by Dr. Cohen at Breslau. He subjected physically-weak and mentally-torpid children to the application of a daily continuous current, with very satisfactory results. Some of the duller children of a class at school were thus treated, and, the report states, with perceptible improvement of their mental powers.

NOTE ON A CASE OF NEURALGIA CURED BY ACCIDENTAL SHOCK.

BY B. HOWARD RAND, M.D.,

Professor of Chemistry in the Jefferson Medical College, Philadelphia.

MR. F., æt. 58, Irish by birth, actor by profession, tall and muscular, of excellent general health, was attacked in the autumn of 1858 with violent neuralgic pains in the right arm and shoulder. There had been no injury to the joint, the motions of which were perfect. All the nerves of the arm and forearm were affected. The pain at times reached from the shoulder to the spine, and more rarely to the left shoulder. The left arm was at no time in the least affected. The pain was intermittent,—worse at night, whether in or out of bed. Treatment, which was varied, had but little effect. The patient began to suffer in general health from pain and loss of rest, and the affected arm visibly lost size and began to lose power. In January, 1859, the pain came on only every other night: it was not controlled by persistent and free use of antiperiodics. On the 23d of January, after an evening of great suffering, as he quitted the theatre he slipped on the ice and fell, striking the affected shoulder with violence. The pain was intense; he said that he thought at the time that the "arm was torn from its socket." This soon ceased, and was followed by a feeling of warmth and "naturalness." The neuralgia ceased, and has not since returned. He has been under my care occasionally, for slight ailments, up to the present time. I saw him two weeks ago, more than thirteen years after the accident; he was then in excellent health.

I put the foregoing case on record as a simple matter of fact, without attempting any explanation of the result.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

CLINIC OF PROFESSOR AGNEW.

Reported by Dr. ELLIOTT RICHARDSON.

VARUS OF RIGHT FOOT.

AT Prof. Agnew's clinic, October 14, 1871, a case of congenital varus of the right foot in a child aged thirteen months was presented.

This deformity, though generally congenital, often commences after birth as a result of infantile paralysis, in which the muscles which tend to adduct and invert the foot, being unopposed by the paralyzed muscles, are left free to act, rotate the foot inward upon its long axis, and, by the preponderating influence of the muscles attached to the tendo Achillis, elevate the heel. The muscles chiefly engaged in the production of this deformity are the gastrocnemius, soleus, and tibialis anticus. The extensor proprius pollicis, and sometimes the extensor longus digitorum, also aids in retaining the foot in this position.

Prof. Agnew described the changes in structure which the foot undergoes when long subjected to this unequal action of the muscles. The plantar fascia becomes contracted, the arch of the foot increased, and the foot much shortened. The ligaments on the outer side of the foot and ankle become elongated, and in time the shape of the tarsal bones becomes much altered. He said, in the treatment of this deformity mechanical appliances bear a very important part, but that they are incompetent, without operative measures, to produce a cure in most cases. The operation should not be performed at too early an age, but should be postponed until such time as the skin assumes sufficient firmness to endure the pressure of the splint, and the foot is somewhat developed in size. When, however, the foot is not too short and round, it may be done at any time. Unless the deformity be very great, tenotomy of the tendo Achillis is sufficient,—the splint usually being competent to overcome the action of the other muscles. The patient was etherized, the tendo Achillis divided subcutaneously, and the external opening promptly closed with an adhesive strip. The foot was then brought into a normal position, the anterior portion enveloped in lint spread with cerate, and a metallic splint adjusted to it. This splint is a modification of Scarpa's, and admits of two movements at the ankle, which are regulated by screws, so that the foot may be abducted and the heel depressed at pleasure. Prof. Agnew said the whole secret of success in subcutaneous tenotomy consists in exclusion of the air from the subcutaneous structures. He also thought that the immediate restoration of the foot to a normal position, as far as practicable, is preferable to the plan of gradual reduction recommended by some operators. The union of the divided tendon is a rapid process, and in about six weeks a cure in the deformity might be expected to be well advanced.

October 18.—The case has progressed rapidly. The foot is now nearly straight, and the splint has been retained without inconvenience.

GOITRE.

At the clinic held October 18, a case of this disease in a girl 13 years of age was exhibited.

The tumor was firm to the touch, was large and symmetrically trilobed. It was situated just below the larynx, upon the trachea, to which it was attached. It was first noticed by the patient two years ago, but within the past two months had grown more rapidly. It was painless, gave rise to no inconvenience in the acts of respiration and deglutition, and was not associated with any cardiac disease.

The lecturer said that the affections of the anterior portion of the neck for which this disease may be mistaken are, cystic disease of the thyroid gland, enlargement of the thymus gland or of the supra-sternal lymphatic glands, and ophthalmic goitre. From the first it may be distinguished by its symmetry and trilobed shape; from the second, by its seat and non-interference with respiration; from lymphatic swelling, by the fact that these glands are situated near the median line and do not

extend laterally to the degree observed in goitre; and from ophthalmic goitre, by the absence of cardiac or ophthalmic complications.

The treatment found most successful in goitre is the internal and local use of iodine. In this case the following was ordered: *R* liq. iodinii comp., gtt. xij S. t. d.; iodine ointment to be well rubbed into the skin over the surface of the tumor twice daily, at the same time subjecting the part to heat.

CYSTIC TUMOR OF BREAST.

On the same day, a case of tumor in the breast of a woman aged 27 years was shown. She was the mother of two children. After the birth of the first, about four years ago, this tumor commenced to form, and was attributed by her to the irritation of a pimple.

The tumor was lobulated and elastic, not very hard and not very heavy. Situated immediately over it was a peculiar horn-shaped erectile tumor, which could be emptied by pressure. Excepting this, the skin covering the growth was not altered in appearance nor adherent to it at any point, neither was there any implication of the lymphatics of the axilla.

Prof. Agnew said that, from the youth of the patient, the duration of the tumor, its origin in injury, the mobility of the skin over its surface, the absence of enlarged superficial veins, of depression of the nipple, and of lymphatic complication, he believed the tumor could not be cancerous. He considered it to be a cystic growth, and recommended its removal.

CANCER OF BREAST.

At the same clinic a woman 58 years of age was presented, who was suffering from a tumor of the breast of a different character from the preceding.

This was a large cancerous growth in the left breast. She first noticed the tumor two years ago. It grew rapidly, and was removed a year ago last May. Two weeks after removal the growth reappeared, and had since then made rapid progress.

It was at this time large, firm, and heavy, involving the entire gland, and had at several points upon its surface ulcers, which were surrounded by the purplish hue peculiar to cancer. It was the seat of lancinating pain shooting from the breast to the axilla, the glands of which were much swollen. The tissues surrounding the cancerous growth were swollen and indurated from cedematous infiltration, and the veins in its vicinity were much enlarged.

In regard to treatment, Prof. Agnew said operative measures were out of the question in this case, as the disease had made such progress as to preclude all possibility of beneficial results therefrom. He considered the presence of cedema a positive contra-indication for operation.

The treatment directed was the free use of iron and arsenic.

In regard to condurango, recently introduced as a cure for cancer, the lecturer said he believed it to be utterly valueless in this disease.

SERVICE OF F. E. GARRETSON, M.D.

Reported by Dr. DE F. WILLARD.

PHOSPHOR-NECROSIS.

THERE is, gentlemen, a disease of the maxillary bones which is found only in those persons engaged in the manufacture of lucifer-matches; and, as instances are but rarely presented to this clinic, I will occupy the major portion of the hour in the consideration of the case before us.

The patient is a woman 45 years of age, who informs us that she has been engaged in the business for fifteen years, a portion of the time having been spent in Germany, the remainder in this country. Her symptoms are so typical that we may save time by deferring their enumeration until we reach them in the regular course of delineation.

The disease is a form of necrosis, caused by oxidized phosphorus introduced into the system by dissolution in the saliva, uniting perhaps with one of the alkaline salts which there so constantly abound. These fumes consist of phosphorous and phosphoric acid (the former being easily convertible into the latter by simple admixture with air), hypo-phosphorous acid, phosphoretted hydrogen, and possibly even a little of the pure vapor of phosphorus itself.

To these dangerous fumes the dippers and dryers in such

establishments must necessarily be exposed, to the manifest risk of their health. But you will ask, "Is there no prophylactic measure which can be employed?" There is one very important one, namely, the constant watching and filling of every carious dental cavity; for it is stated that this disease never occurs except in persons with carious teeth,—a statement readily explicable when we remember that such cavities would open a more direct route to the pulp, and thus to the periosteum. Attention, then, to such treatment of the teeth should constitute the first element in prevention. The second is scarcely less important. It consists in the use of a *respirator*, so attached to the head that no air can enter the nose or mouth without passing through a cloth diaphragm saturated with a solution of carbonate of lime or soda, or through a layer of sulphate of soda and slacked lime. A small amount of ammonia in the atmosphere would be a useful adjunct, as would also the daily administration of a teaspoonful of carbonate of magnesia internally.

Precisely why phosphorus attacks these bones in preference to others, I am unable to say, barring the dental explanation of ingress; neither can I give you any more satisfaction in regard to the method in which it produces its destructive action. The facts exist, and Salter, I believe, has suggested in explanation that the formation of a superphosphatic incrustation may be incompatible with bone life.

The first symptoms are scarcely distinguishable from those of ordinary caries or necrosis. They are, first, toothache in the carious organ, then periodontitis, lifting the tooth in its socket to such an extent that occlusion of the jaws gives great pain, then swelling and puffiness of the gum, gradually extending to the cheek, which swelling is not open and frank as in ordinary inflammation, but is debased and unhealthy in all its appearances. The bone dies, pus is discharged, riddling the gums or burrowing through the cheek and down the neck; the teeth loosen and fall out, and the general constitution becomes seriously affected. In the lower jaw this destructive process usually progresses, regardless of interference, until the whole body is destroyed, the rami alone remaining; but in the upper maxilla the line of demarkation is not apt to be so definite, and it is more difficult to prognose as to the extent of its ravages. It is, however, more under the control of the surgeon, yet exhibits a decided tendency to recur, unless the constitution is fortified.

The process of death and separation of any phosphor-sequestrum is exceedingly slow, occupying a period of from one to twelve months, or even longer, during which time the patient is not only subjected to the severe tax upon the constitution, but has also to endure an excessively offensive discharge, which not only poisons the very air he breathes, but also passes into his stomach, destroying the appetite and rendering life miserable.

Meanwhile, the periosteum, which seems to resist the enemy longest, has not been idle, but has made an attempt to wall off or enclose this dying portion with new bone, so that by the time the sequestrum is ready to be cast off it lies in a gutter of osteophytic incrustation,—which does not, however, completely cover it in above, and thereby permits a more ready internal escape.

The patient before you is now passing through the process described. The earlier symptoms have all disappeared, and she has now, as you see, a lower jaw which is greatly thickened and diseased, while the edentulous gum is a mass of spongy, sinus-riddled, angry-looking, sloughing tissue. I feel dead bone at every point; yet the sequestrum is not ready for removal. But you may ask, How do I know that it is not ready? In the first place, the disease has not been of long enough duration; and secondly, I find the bone immovable. But here let me warn you that a sequestrum may be so caught and held in the gutter of new material that it is frequently retained long after separation has really occurred. When this is the case, the bone, though apparently firm, yields before strong pressure, and is springy.

Such are some of the features of this justly-dreaded disease.

Once established, can we arrest it by treatment? Usually, we cannot. A certain portion of the bone (especially in the lower maxilla) is inevitably doomed; yet we can do much in the way of supporting the patient under the great drain to which he is subjected, hastening the process of death and separation, and (in the upper jaw) diminishing or circumscribing the advancing disease.

In all cases of toothache occurring in match-makers, then, be upon your guard, seeing that carious cavities are immediately filled and the before-mentioned prophylactic measures employed. If seen in the acute inflammatory stage of periodontitis, the diseased and elevated tooth may be protected from the opposing organ by moulding over some opposite prominent *dent* a little cap of softened gutta-percha, which, when hardened by cold water, will receive the first stroke of the closing jaws and prevent further irritation. Active antiphlogistic measures must then be adopted, and (most important of all) the underlying periosteum and bone immediately relieved from tension by full free incisions made boldly down through the gums until the osseous structures are reached. At the same time, it is wise to remember that the phosphorus-poison may yet be susceptible of partial neutralization by means of carbonate of magnesia, which should be given to the amount of a teaspoonful twice a day,—the same powder being also constantly applied locally to the diseased spot. I say susceptible of partial neutralization; for I do not believe that any known treatment will cause a complete arrest.

Constitutional measures should also be vigorously employed, since it is only at the outset that any benefit may be expected from attempts at resolution. Iron, quinine, cod-liver oil, and stimulants may be urgently pushed for a few weeks; but if no improvement is perceptible after a month's trial, it is better to decrease them and depend mainly upon good air, food, and exercise, since it is not advisable to load a patient's stomach with drugs for ten or twelve consecutive months. In the later stages, the time will again arrive for their employment, being needed to support the strength, and perhaps save the life, of the patient.

During the progress of the disease, free incisions should be made in the gums, in order to give vent to the pus,—to save integumental openings, which are difficult to cure,—and to allow frequent syringings with dilute carbolic acid, Labarraque's solution, or, better than all, the compound tincture of capsicum, with an excess of myrrh and the addition of a little permanganate of potash. In those terrible cases where extensive sloughing occurs, it may be necessary to employ a mop to draw away these discharges and prevent the pus from passing into the stomach.

I have told you that the periosteum resisted the onslaughts of the disease longer than the bone itself; it has therefore been my practice for a number of years to hasten the process of bone-sloughing by inserting into the wound little pledgets of cotton, which, insinuating themselves into its depths, expand, and slowly work off the already separating periosteum, thus leaving it bare and un nourished. You may say that this would only tend to render the sequestrum even larger than if left to its normal course; but I assure you that such is not the case. A portion of the bone is already, as has been remarked, predestined to die, and by this treatment such death is markedly hastened, thus saving weeks of exhaustive drain, and much valuable time, to the patient.

Cleanliness is all-important. In the later stages, the most generous diet (which must be largely liquid), the strongest tonics, the purest stimulants, may even fail to prevent the vital force from yielding, and the patient sinks under continuous hectic, tuberculous complications, or extensive sphacelus.

When hemorrhages occur and exhaust the patient, they should be controlled by the administration of tinct. erigeron. canad., gtt. ij twice a day, or often if necessary.

The teeth should be removed as fast as they loosen, since, if retained, they but irritate the cheek and gums.

Such should be your treatment,—your highest duty being performed in sustaining the constitution and in waiting patiently for separation, be it one or fifteen months. *Early operative interference is only productive of harm*, for, even if not followed by death, an inflammatory sequestrum usually forms, which is but an additional drain. I remember well a girl whom I treated in this city for months, warning her from

* The reader desirous of further facts in regard to the cause and course of this disease will find much interesting material in Von Bibra and Geist's *Phosphorzündholzfabriken*, etc., Erlangen, 1847, or British and Foreign Medico-Chirurgical Review, 1848, or Fifth Report of the Medical Officer of the Privy Council, Bristowe, London, 1863.—DE F. W.

the outset that she must have unbounded faith and patience, —two mental properties, by the way, which are exceedingly difficult to maintain when one sees herself, month by month, becoming worse and worse, and with no encouragement for the immediate future. At about the seventh month, although progressing as well as possible, the patient became restive, and, finding that I persisted in my determination not to cut away the sequestrum, sought other advice. The jaw was resected through the ramus, and in ten days she was in her grave. She died of pyæmia,—or shall I say blood-poisoning? And why? Because that bone was in such a soft porous condition, between life and death, that it sucked up the pus as readily as a sponge imbibes water. I cite this case because it is but a mirror of my personal experience, and, although it is in opposition to the views of many Continental surgeons, yet I feel that my words will be found true,—as regards American cases, at least.

When, however, the proper time has come, and the sequestrum is loose,—as you will determine by frequent trials,—you can lift it away with but little risk; and a mass of new material will remain, which, though subsequently undergoing a certain amount of absorption, will always assist greatly in mastication, and preserve the contour of the face with but slight deformity. External incisions are seldom necessary, even for the removal of an entire jaw; the internal openings requiring only to be enlarged to the adequate extent. It is easier to take away the lower jaw by sections, so that it becomes necessary to split it at the symphysis with chisel, saw, or, preferably, cutting bone-forceps. Once divided, the pieces can be lifted without trouble, unless held by overlying osteophytic structures or indurated soft parts, which circumstance will be readily recognized by the springy impression imparted to the hand.

Even when the entire jaw is removed, the remaining new structure forms a sort of ligamentous attachment to the temporal bone, which allows of joint-movement.

When the dead bone is thus removed "at full term," as we may call it, there is but little danger of a return of the disease, provided due care be used. The occupation should be changed for an out-door one, good diet secured, and frequent syringings practised with water medicated by iodine or creosote.

In my remarks I have been speaking with especial reference to the lower jaw. In the upper one, I will say that necrosed portions may be removed at a much earlier period, since there is no definite point at which the disease will cease, and there is less danger of pyæmic poisoning. The tendency to recurrence is, however, very great.

[The patient was put upon the plan of treatment above indicated, being directed to return at frequent intervals, and also warned that no immediate improvement need be expected.—D.E.F. W.]

OBITUARY.

PROF. SAMUEL JACKSON, M.D.

THIS distinguished practitioner and lecturer, who died on the 5th of April at his residence in this city, was the son of Dr. David Jackson, one of the earliest graduates of the College of Philadelphia, a member, indeed, of the very first class, that of 1768, who took the degree of Bachelor of Medicine in the following year. He entered into business as an apothecary, and the son was brought up in the same path. The latter was born about the year 1787, and at the time of his death was therefore eighty-five years of age. He received his elementary education at the University, and commenced the study of medicine with Dr. James Hutchinson, continuing it afterwards with Professor Caspar Wistar. He took his medical degree at the University in 1808, but did not at once enter upon the practice of his profession. In consequence of his father's death, he was compelled to enter into the drug business as his successor. He was not long afterwards prominent in various official relations,—as a politician, in which last capacity he was strongly Democratic in his views, and as a member and President of the Board of Health. He relinquished business about 1820 to devote himself to the cares of practice. The yellow fever prevailed at this time in Philadelphia, and he wrote some excellent papers on this subject,

combating the doctrine of contagiousness, which led to a controversy between him and the New York physicians, more particularly Hosack and Ducachet. He was the first to propose the boarding-up of infected localities,—a plan ridiculed until it was found to be effective.

When the College of Pharmacy was established, in 1821, he was appointed Professor of Materia Medica, and continued to occupy this position until 1827, when he became the assistant to the Professor of the Theory and Practice and Institutes of Medicine in the University of Pennsylvania, Dr. Jackson lecturing on the Institutes, and Dr. Nathaniel Chapman on the remaining important portion of the conjoined branches. When appointed to the University, he had already been lecturing since 1823 on Materia Medica and Therapeutics in the Medical Institute of Philadelphia,—familiarily known as Chapman's Summer School, after its founder,—and here he still continued until about the year 1840. In 1835 he was appointed to the chair of Institutes in the University, which was created by the separation of this branch from that of the Theory and Practice, and its re-institution as it originally existed in the College of Philadelphia, when Dr. Benjamin Rush was the occupant of the chair of Institutes.

In 1832, Drs. Meigs and Jackson were appointed a committee to visit Montreal and Quebec, where the cholera was then prevailing, and they returned with many new suggestions for hospitals, including, among others, coffin-shaped bathing arrangements, which from their appearance excited considerable remark. In the early part of this year, Dr. Jackson published an essay on the subject of cholera, and during the same year was presented by Councils with a silver pitcher in acknowledgment of his hospital services, as were also Drs. Hodge, Chapman, Parrish, Condie, and others, who had charge of cholera hospitals.

Dr. Jackson's reputation grew rapidly as a lecturer and a practitioner. He was the first one here who made headway and threw new light on the physiological doctrine of absorption in opposition to the Cullenian school and solidism, in 1827. He was an exponent of the views of Broussais, and wrote a number of essays in exemplification of his peculiar theories, which, however, in after-life he abandoned. Broussais was, indeed, in those earlier days the prevailing doctrine. His only systematic work was that on the "Principles of Medicine," issued in 1832, but not afterwards republished. He was probably the first physician here who put into practice auscultation and percussion. As a lecturer he possessed immense enthusiasm, and was very popular with his classes, who admired him not only as an amiable gentleman, but also as an agreeable and instructive teacher. He was a constant reader, and kept himself and his students up to the very latest point in connection with the progressive advancement of physiology and of medical science generally. He was a kindly, hospitable friend, and an honored citizen and medical adviser. His practice was extensive, and at one time embraced a very large number of consultations, his patients being largely from abroad, the South particularly. As a clinical teacher he was quite prominent through a long series of years, especially in the extensive practical field offered at the Almshouse. Being one of the first to introduce clinical instruction in that institution, he lectured there for twenty-two years, resigning from it in 1845. He took his share also in the clinics of the University from 1843, when they were first inaugurated, until the resignation of his professorial chair in 1863, after which he was elected Emeritus Professor.

Dr. Jackson lived in a transition-period of the history of medicine, and his life would form a centre around which might be woven an interesting sketch of the remarkable progress of medical science, changes of theories, introduction of novelties, etc.; for in his active private practice, as in his didactic courses at the University, and his clinics there and elsewhere, he was always ready to seize upon and call into requisition everything that could benefit the cause of medical science. It may be mentioned, as a matter of interest independent of his medical career, that in the war of 1812 he served as private in the First City Troop of Cavalry of this city, when that body was in camp at Mount Bull, Maryland, watching the British fleet in the Chesapeake.

The conclusion of the life of this pioneer in the profession, as he has been not inaptly called, was during several years

past a period of gradually increasing mental and physical impairment. He had suffered for many years from neuralgia. Then supervened a want of balancing-power in the movements of the limbs, but, as this peculiarity of muscular action increased, he became more fleshy. For more than two years past he had been unable to get up without assistance. Since an attack of congestion of the lungs about two years ago, his general condition had deteriorated. His mind assumed a curious phase, in which, in a pleasant manner, and forgetting his bodily infirmities, he would occasionally speak to some of his honored colleagues of former days as if he was still engaged in active private and hospital practice,—almost as if it was a waking day-dream, the reflection of some of the scenes of usefulness in which he had at one time so prominently figured.

DR. LOUIS SYDENHAM STILLÉ, son of Alfred Stillé, M.D., Professor of the Theory and Practice of Medicine in the University of Pennsylvania, died in this city May 7, 1872, in the twenty-third year of his age. He was the author of an article on "The Origin of Fibrin," in the number of this journal for August 15, 1871, the writer of several book-notices, and a young man of much promise in his profession.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Dr. J. G. STETLER, Vice-President, in the chair.

A CONVERSATIONAL meeting of the Philadelphia County Medical Society was held Wednesday evening, March 27, 1872, at 8 o'clock.

DR. HENRY H. SMITH called the attention of the meeting to a case that had been brought to his notice by Dr. James Collins.

The patient was a gentleman, aged 35 years, who had suffered for three years. Emaciation moderate; expression cheerful, not indicative of continued suffering; color good. Married, and the father of several children, the youngest a very healthy child about twenty months old. The patient when first seen was squatting on his heels on the commode, with his pantaloons down as if in the act of defecating; and this was his almost constant position in order incessantly to evacuate the bladder. When the patient stood up for examination, the penis was found firmly retracted to the pubes, not being more than two inches long, with the skin circularly wrinkled, the glans penis quite livid, shrunken, and cold. There was marked pain near the head of the penis, as in vesical calculus. The perineal and anal muscles were also contracted, and there was a deep-seated pain about the middle of the perineum. The perineum was somewhat emaciated, and the anus retracted towards the coccyx. The abdominal muscles were firmly and spasmodically contracted, the recti being in knots, and the muscular fibres of the internal oblique and transversalis muscles apparently forming a tumor which occupied the right iliac region. This tumor was about four inches long and three inches wide, extending from the anterior superior spinous process of the ilium to a little beyond the point of the internal abdominal ring. The tumor was quite hard to the touch, but resonant and tympanitic on percussion, resembling a distended cœcum. When the patient took the squatting posture, this tumor entirely disappeared from sight; but pressure in the right iliac fossa showed a general induration of this region as far back as the psoas muscle. After passing a little water and some flatus, the patient rose from the commode free from pain, but the elastic tympanitic tumor was again present. He stated that he had constant pain in the right iliac and hypogastric regions, except the day before our visit, when there had been a very free discharge of yellow, stringy matter, "like semen," at stool, after which he felt much relieved. He also stated that this discharge had occurred several times before, at intervals of two or three weeks, and was always followed by relief from pain. The pulse was natural, digestion good, and his sleep fair, but he spent the whole day in the manner before described. As he had been carefully sounded several times by different surgeons without any stone or tumor being found in the bladder, though the

coats of the bladder were found thickened, it was decided to etherize him and examine the rectum and pelvis more minutely than had been previously done. Accordingly, whilst in a state of anæsthesia, the fore-finger was passed into the rectum. No hemorrhoids existed, and there was no scirrhous or other contraction of the gut. The prostate gland seemed normal. The coccyx was unusually movable, but no signs of fracture, which had been supposed to exist, could be detected. The iliac nerve could be felt very much thickened just before it emerged from the sacro-sciatic notch; and pressure towards the superior pelvic strait showed an induration in the iliac region, as if caused by a deposit of lymph. Pressure with the left hand on the right groin, whilst the right fore-finger was in the rectum, rendered this induration behind and around the cœcum more apparent. On dilating the rectum widely with a bivalve speculum, the mucous coat of the gut was found to be excessively florid and dry, with a deficiency of the ordinary mucus. About two inches within the anus, on the anterior face of the gut, was a small ulcer, the size of a pea, filled with a pultaceous slough, apparently the orifice of an internal or pelvic fistula, from which the discharge of the previous day had probably escaped. This orifice was not probed, owing to the struggles of the patient in recovering from the anæsthetic. The diagnosis could not be positively made from this single examination, but the case was regarded as one of pararectitis,—if such a word could be formed,—resembling parametritis in the female. This pararectitis was apparently caused by an abscess or inflammatory condition of the connective tissue of the iliac region, especially that about the cœcum and appendix vermiformis, and might have ensued on inflammation or perforation of the latter. Consequent on this induration there was pressure upon and irritation of the sacral and lumbar nerves, involving perhaps also the ganglia of the sympathetic, as a result of which there ensued the intense neuralgia of the neck of the bladder and rectum, with spasmodic contraction of the erector penis and accelerator urinæ muscles, together with the sphincter and levator ani. This was attended by a similar contraction of the lower fibres of the recti and other abdominal muscles. The singularity of these symptoms, the very curious retraction and coldness of the penis, the phantom tumor of the right groin, and the occasional evacuation of an apparent abscess, all deserved further analysis.

Dr. SMITH hoped some member of the Society might be able to suggest the true explanation of a train of symptoms that was certainly anomalous.

Dr. BARTON brought to the notice of the meeting the case of Mrs. L., aged 25, married, who has been suffering one week with great pain in the back, and a sense of fulness in the pelvis, with great desire to micturate, but is able to do so only once in the twenty-four hours. She has not menstruated for three months. On examination, the uterus was found to fill up the pelvis, the os high up under the pubic symphysis and the fundus in the hollow of the sacrum, the retroverted enlarged uterus thus pressing slowly upon the neck of the bladder, interfering with micturition. After placing the patient upon her hands and knees, and emptying the bladder, strong pressure was made upon the fundus by the fingers, and subsequently by a large sound, but without success. The patient complained bitterly; and, indeed, all the force was used that could safely be exerted. Cazeau states, "when we are unable to replace the retroverted pregnant uterus, in consequence of adhesions, and the symptoms are at all urgent, abortion should be induced."

Dr. SMITH advised the use of Dr. Henry Bond's instrument reported in the *American Journal* about 1850.

Dr. BARR suggested the use of the colpeurynter, equable, persistent pressure being kept up by it for two or three days.

Dr. GROVE referred to a case of Dr. Harlan, of this city, published in the *Pennsylvania Hospital Reports* for 1869. The case was one of retroversion of the gravid uterus, treated in the St. Mary's Hospital by introducing into the vagina a colpeurynter, and gradually inflating it while the patient was under the influence of chloroform. It resulted in restoring the uterus to its normal position, but was followed by abortion.

Dr. COLLINS mentioned that he had seen at the post-mortem of a lady, aged 53 years, dying of exhaustion from dyspeptic symptoms, a stomach the greater curvature of which measured thirty-six and a half inches.

PHILADELPHIA MEDICAL TIMES.

A SEMI-MONTHLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

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WEDNESDAY, MAY 15, 1872.

EDITORIAL.

DR. SCHOEPPE.

SOME three years ago, a German doctor practising in Carlisle was tried for killing, by means of poison, one of his patients,—an elderly single woman named Stenicke,—convicted, and sentenced to be executed. Although an application for a new trial, made shortly after, was unsuccessful, yet he has neither been hanged nor pardoned, but still lies in Carlisle jail. A recent application for a new trial was granted, and in August next the man is to be again tried for his life. The expense of his defence will amount to about five or six hundred dollars, and that money must be contributed by those who are interested in the case.

It is notorious that the chemical analysis made by Dr. Aiken, Professor of Chemistry in the Baltimore Medical College, which furnished the principal ground of the verdict, has been pronounced by many of the best chemists in the country to be exceedingly defective, and entitled to no confidence whatever. Such was shown conclusively to be its character by Drs. Himes and Wormley, who testified at the trial. The autopsy, which was supposed by the government to furnish strong confirmatory proof of poisoning, was made in a most bungling manner, and actually proved nothing but the incompetence of the man who made it. The evidence of the medical men who testified, on the side of the government, as to the significance of the symptoms, was simply a wonderful display of ignorance and foolish presumption.

Among the purposes of this trial, besides that of saving life, is that of averting from this community the disgrace of a verdict rendered in the very face of the most explicit testimony of true science, and especially that of protecting the medical profession of this State against the effect of a precedent on the strength of which any member of it, however skilful or respectable, may be convicted of murder in the first degree. It is no extraordinary thing for patients to die under circumstances that raise a suspicion of poisoning among credulous or ill-natured people. Let circumstances, easily conceivable, favor the arrest and trial of the attending physician, what chance of safety would he have against such evidence as produced the conviction of Schoeppe?

The question to be settled next August is not merely that of the guilt or innocence of Paul Schoeppe, but whether every physician in the community is not in momentary jeopardy of life. Do we mistake, then, in saying that the profession is deeply interested in the result of this trial, and, consequently, that it should furnish the means of making it a fair one? Accordingly, we now solicit contributions for this purpose. A committee which was raised to furnish the means of defence at the first trial is still acting, the members of which, whose names we give below, will receive contributions for the same purpose at the next trial. It is desirable, however, that they be made speedily.

Dr. Fricke, 225 North Sixth St.; Francis Wells, Esq., *Evening Bulletin* office; Geo. W. Northrop, Esq., 615 Walnut St.; G. Kellner, Esq., *German Democrat* office; Professor Oswald Seidenstricker, 1016 Cherry St.; Dr. I. Ray, 3509 Baring St.; A. Eugene Smith, 615 Walnut Street.

OUR NOTICE OF DR. TURNBULL'S WORK.

DR. TURNBULL has written to us, complaining of the notice of his work which appeared in the number of this journal for March 1, 1872. He has transmitted to us the letters of several distinguished otologists, all of whom agree that the notice was in one respect unfair. Rather than trouble our readers with the correspondence, which would occupy nearly a page of our journal, we referred the matter to the gentleman who wrote the notice, knowing that if he had made a mistake he would have the candor to acknowledge it, and have received from him the following note:

"In reviewing Dr. Turnbull's work upon the Diseases of the Ear, we drew attention to the author's failure to make any mention of the 'menisci,' or interarticular cartilages in the chain of ossicles.

"From the frequent references made by various otological writers to the presence of such an interarticular cartilage, and having ourselves seen it several years ago in Stricker's laboratory, we were led to the erroneous conclusion that not to make any mention of the meniscus in such an extended treatise as that of Dr. Turnbull must be regarded as a great oversight. Yet we find, upon looking up the subject, that before Rüdinger's* publications no one deemed this tiny structure worthy of the dignified appellation of *meniscus*.

"As these publications did not make their appearance before the latter part of 1871,—not until after Dr. Turnbull's work went to press,—he of course could then have had no knowledge of their contents. We find them, however, cited in his bibliographical list, which was printed later than the rest of the work.

"MAY 6, 1872."

We simply add that we were in this instance, as we have always been, exceedingly careful in the selection of a reviewer, and have every reason to believe that the notice, except in the point above alluded to, was a perfectly just one.

* "Histologie des Gehörorgans," 1871.

"Der Meniscus in dem Hammer-Ambogelenk," *Monatsschrift für Ohrenheilkunde*, iv. 9, 1871.

THE MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

THE proceedings of the American Medical Association will be found fully reported in the current number of this journal. They have encroached so largely upon the space usually reserved for editorial matter, that we must for the present defer comment upon them. The meeting was a very large one,—the largest in the history of the Association,—over seven hundred delegates being admitted to seats. The sessions were, we are glad to say, harmonious; some feeling, it is true, was excited by the report of the Committee on Ethics against the admission of the delegates from the Howard Hospital, Washington, D.C., but this did not lead to any uncontrollable disorder.

From the variety and extent of the entertainments offered to the delegates, we have no doubt that the meeting in this city will be remembered with pleasure by them.

REVIEWS AND BOOK NOTICES.

EARTH AS A TOPICAL APPLICATION IN SURGERY. By ADDINELL HEWSON, M.D., one of the Attending Surgeons to the Pennsylvania Hospital. "What relates to Truth is greater than what relates to Opinion." 12mo, pp. 309. Philadelphia, Lindsay & Blakiston, 1872.

To those members of the profession who have been acquainted with the surgical practice of the Pennsylvania Hospital during the last two or three years, the views of this distinguished member of its staff will appear as twice-told tales. There is hardly any surgical proceeding which has been more generally commented upon in this country than the one so strongly advocated by Dr. Hewson in this book; and, though subjected to criticism often of an adverse character, yet we think the general desire upon the part of surgeons has been to submit it to a fair trial, and many have experimented with it in their own practice.

The author in great measure limits himself to an examination of the chemical action of earth, thinking that in this manner the claims of the treatment will be best supported and its advantages most fully evidenced. Ninety-three cases are given in detail, which are interesting in themselves as records of clinical work, and among which will be found every grade of injury, from the laceration of a finger to the amputation of the thigh. Differing widely as they do in degree and extent, one point of resemblance, however, runs through all; for in extirpation of the eyeball, removal of hæmorrhoids, or the operation for the relief of vesico-vaginal fistulæ, in all alike was earth freely applied, with results eminently satisfactory to the surgeon, and generally with equal satisfaction to the patients,—though with the last-named Dr. Hewson found, as he anticipated, some prejudice and opposition to contend against.

The author's comments upon the cases he records are divided into—I. Effects as to the contact of the earth with the part; II. Effects naturally incident to the cases; III. Its power as a deodorizer; IV. Its influence over inflammation; V. Its influence over putrefaction; and, VI. Its influence over the healing processes; and in each case the results are regarded as generally favorable to the earth-treatment.

The remainder of the volume—upwards of one hundred pages—is occupied with a consideration of the *modus operandi* of the earth-treatment,—its philosophy being supposed to consist in the deoxidizing power of clayey earths, together with the property they have of furnishing to the tissues that dubious substance, ozone. Dr. Hewson concludes his work by claiming "for earths possessing such silicates (double salts of soda, potash, lime, and ammonia) a positive power to aid formative action in the flesh when brought in close contact with it."

To those of our readers who may not be familiar with the method of applying earth, we will say that the process is very simple: yellow clay or clayey earth, such as underlies large portions of Pennsylvania, is well dried,—not roasted,—finely powdered, sifted, applied directly to the surface of the wound and retained there by any form of surgical appliance, and the dressing is changed as often as it becomes saturated with the discharge.

The cases of which clinical histories are given will be read with interest, furnishing as they do the strongest kind of argument which can be adduced in favor of the plan of treatment. From them each reader will draw his own conclusions, and probably be induced to submit the plan to an *experimentum crucis* at his own hands rather than labor through the dull and doubtful agricultural chemistry with which the book is somewhat heavily loaded. We can hardly claim to be an expert in this latter branch, but General Pleasonton's experiments, cited by Dr. Hewson, in which both animal and vegetable life are reported to have prospered best under blue glass, have always appeared to us delusive, inasmuch as there could be no actual increase of blue rays, but merely a detention of the other rays which go to make up white light. Indeed, we notice that M. Bert has recently shown, in a communication to the French Academy of Sciences, that while plants do better under blue glass than under that of any other color, pure white light is immeasurably superior in promoting vegetable growth.

This book has been looked for with considerable interest by the profession, and we congratulate Dr. Hewson on the issue of his open and manly defence of the views he has so vigorously advocated in the face of considerable opposition.

The illustrations by the new Woodbury process, four in number, look to us neither better nor worse than ordinary photographs, which at best show reparative changes but poorly; and we are unable to see from these pictures any evidence of better results following the earth-treatment than can easily be selected in ordinary hospital-practice conducted upon older methods.

ANÆSTHESIA, HOSPITALISM, HERMAPHRODITISM, AND A PROPOSAL TO STAMP OUT SMALLPOX AND OTHER CONTAGIOUS DISEASES. By Sir JAMES Y. SIMPSON, Bart., M.D., D.C.L., late Professor of Midwifery in the University of Edinburgh. Edited by Sir W. G. SIMPSON, Bart., B.A., etc. 8vo, pp. x., 560. New York, D. Appleton & Co., 1872.

On the authority of Addison, that colossus of learning Dr. Johnson defines a genius to be "a man endowed with superior faculties;" and it will generally be admitted that the definition accurately describes the lamented Sir J. Y. Simpson, the second volume of whose collected works, edited by his son, forms the subject of this notice. Few men have exhibited such versatility of talent, or possessed characteristics of intellect and heart so well calculated to excite the admiration and esteem not only of his professional brethren but of the world at large, as the late occupant of the chair of Midwifery at Edinburgh. Remarkable for brilliancy of conception, and abundantly able to present his ideas in an attractive dress, he has perhaps done more to astonish the medical profession by striking propositions than any other man of his time, and by turns each division of it received instruction from him.

The name of Professor Simpson will always be associated with the subject of anæsthesia, and especially with the introduction of chloroform. How vigorously he strove to bring these subjects to the notice of physicians is amply evidenced by the volume before us, one-half of its bulk being occupied with what he wrote about them; yet much of it is now interesting only in an historical point of view, and as displaying the character of the author. Some of his latest papers, being the controversy with Dr. Jacob Bigelow on the discovery of anæsthetics, occupy the first place in the book. To us the true state of the case appears to be as follows: in America the applicability of anæsthetic agents for the relief of pain in surgical operations was found out, while to Dr. Simpson belongs the credit of their application to assuage the pangs of labor, with the suggestion and introduction of chloroform as a substitute for ether. But we have no intention of reviving controversy, which is almost always objectionable and generally uninteresting to those outside the arena of strife. The whole matter is now narrowed down to a question of the relative

merits of ether and chloroform, each form of anæsthetic having devoted advocates; and the subject cannot be regarded as settled, for even as we write we observe that in St. George's Hospital, London, ether, so long contemned, has been subjected to further experiment, attended with a satisfactory result. The various experiments made by Professor Simpson, and his investigations into the locally anæsthetic effects of chloroform and carbonic acid, are also included in this first division, which covers 288 pages, and is composed of six parts, entitled, respectively, History of Anæsthesia; Defences of Anæsthesia; The Nature and Power of Various Anæsthetic Agents; Applications of Anæsthesia in Surgery and Medicine; Applications of Anæsthesia in Midwifery; and Local Anæsthesia.

Hospitalism has the second place in the volume before us, under which head are included some of Sir James's latest contributions to medical literature, and which form by no means the least interesting portions of the book. Their general tenor is well known, as is the active controversy with Mr. Holmes and others to which their first publication led. The subject is an extensive one, and yet *sub judice*, but the tendency seems decided to adopt, with more or less fulness of detail, plans of hospital construction based upon the idea that "there is safety in segregation, danger in aggregation."

Hermaphroditism is the subject next treated of, the paper being the classical article on that topic contributed by Sir James to the *Encyclopædia of Anatomy and Physiology*. The essay, as now printed, contains observations on the pro-ovarium and vesiculæ seminales made since its first publication, and three later cases, with which exceptions it stands as at its first appearance in 1839. Much as its author did to establish a reputation by his other writings, we regard this treatise as evidencing a higher capacity for scientific work than any other of his productions with which we are acquainted; and had we written such an essay, even though it stood alone, we should be satisfied that our name would not be forgotten.

The proposal to stamp out smallpox and other contagious diseases, which concludes the volume, will attract many by its title and be read with interest at the present time, when the first-named affection is so extensively prevalent, though really possessed of less intrinsic value than any other article in the book. To accomplish this very desirable result,—namely, the obliteration of these scourges of humanity,—in addition to thoroughly compulsory vaccination and revaccination, the following regulations are insisted upon as essential: 1. Immediate notification of the proper authorities of the existence of a case of disease; 2. The complete isolation, at home or in hospital, of the sick and *convalescent*; 3. Surrounding those affected with attendants who are insusceptible to the poison, and therefore incapable of conveying it; 4. Proper disinfection of the persons, bedding, clothing, and dwellings of both sick and attendants. That such measures, invariably carried out, would diminish the number of cases, we have no doubt,—and some such expedients have been adopted in most American cities; but for smallpox, at least, without compulsory vaccination in both city and country, we fear no other means will be found of much avail.

The book is well edited by Sir W. G. Simpson; and we regard the fact of his being a layman as advantageous to the profession, since it is probably owing to this circumstance that we are permitted to enjoy an edition of his father's works so little encumbered by a commentary in foot-notes. A general index, and one showing the original sources from which these reprints are derived, complete the volume.

We have noticed no typographical errors, and the printing and paper are both excellent,—reflecting credit upon the publishers; while the book is of a most convenient size.

PROCEEDINGS OF THE AMERICAN MEDICAL ASSOCIATION.

THE Association met in Horticultural Hall, Philadelphia, Tuesday, May 7, 1872, and was called to order by Dr. D. W. Yandell, of Kentucky, who was elected President at the preceding annual meeting held in San Francisco. The following Vice-Presidents were also present: Drs. Thos.

M. Logan, of California; Charles L. Ives, of Connecticut; R. F. Michel, of Alabama; and J. K. Bartlett, of Wisconsin.

Rev. William Bacon Stevens, M.D., D.C.L., Bishop of the Protestant Episcopal Church in Eastern Pennsylvania, opened with prayer.

The President then introduced Prof. Robert E. Rogers, of Philadelphia, who welcomed the delegates to the city on behalf of the committee of reception, of which he was chairman, and of the medical profession of Philadelphia.

Dr. Edward Hartshorne, on behalf of the committee of arrangements, announced the extensive preparations made for the entertainment of the visitors.

The President then delivered his annual address. He began by approving the migratory character of the Association. If it were stationary, he said, its meetings would no doubt be attended by many, and it would, while conducted with wisdom and moderation, exert a good influence upon the profession all over the country. But its influence is incalculably enhanced by its journeyings from point to point. In this way multitudes are brought into sympathy with it who otherwise would never attend one of its meetings or read a page of its proceedings. Whatever else may be denied the Association, no one can hesitate to admit that it is grand in its annual migrations. No other medical body ever in the same time traversed spaces so vast.

After alluding to the novelty of scenes met with a year ago in California, he said the present visit to Philadelphia was also one of peculiar interest, on account of the historical associations of this city. After a brief survey of the physicians whose names are inseparably connected with the early history of Philadelphia, he alluded in touching language to the recent death of Dr. Samuel Jackson. The orator then considered the wide-spread feeling of discontent which has been for many years manifested in respect to the present system of medical instruction. He did not share in the gloomy views of the future which many have expressed; but, while admitting the grave defects in the prevailing system, he thought too much importance had been attached to a liberal education. He reviewed the plan of instruction adopted in Germany, and concluded that the great demand in this country was for practical physicians, rather than for those learned in the languages. Great stress was laid on the importance of clinical teaching.

The orator then alluded to the woman question, which has agitated the Association at previous meetings. He contended that there was a psychical as well as a physical difference between men and women; and, while admitting that women might succeed in some lines of the medical profession, he thought there were certain paths which, for the honor of the sex, he hoped they would never aspire to tread.

He added, "I have strong doubts whether female physicians will ever become very numerous. Their own sex does not incline very much to them. The movement which is now startling the world by its din will probably end in no great results. But it depends on the public. What the people decree in this matter is a law to which all, we and the women alike, must bow submissively. If they want women doctors, such will be found ready to meet the demand. If those now pressing forward in their studies so eagerly find their services are not wanted, they will take down their signs, get married, become lecturers, or turn to some more lucrative employment. I hope they will never embarrass us by a personal application for seats in this Association. I could not vote for that."

The following resolution, offered by Dr. H. F. Askew, of Delaware, led to a long discussion, and was finally agreed to without a dissenting vote:

"Resolved, That all questions of a personal character, including complaints and protests, and all questions on credentials, be referred at once to the Committee on Ethics, and without discussion."

The President announced that the Committee on Ethics would be composed of Drs. H. F. Askew, of Delaware; N. S. Davis, of Illinois; Calvin Seavey, of Maine; J. K. Bartlett, of Wisconsin; and Samuel D. Gross, of Philadelphia.

The Association adjourned at two o'clock.

In the evening, the Biological and Microscopical Section of the Academy of Natural Sciences received the members in the foyer of the hall, where about one hundred microscopes, with

gas-burners to afford the requisite light, had been arranged. The slides contained many interesting specimens of natural history, and were inspected by a throng of ladies and gentlemen until a late hour. The body of the hall was set apart for promenade, and music was provided to add to the pleasure of the occasion.

Second day's proceedings.—The meeting was called to order in the morning by Dr. T. M. Logan, of California, one of the Vice-Presidents, the President being temporarily absent.

The Association was then adjourned for ten minutes, to allow the delegates to consult with each other and to elect one from each State and Territory to form the Nominating Committee.

While this was being done, the papers, tables, etc. in use by the officers of the Association were transferred to Dr. Wylie's church,—First Reformed Presbyterian,—Broad Street, below Spruce, where the delegates afterwards convened; and the remaining portion of the business was transacted in that edifice. The reason assigned for this change was that the voices of the speakers could not be distinctly heard in Horticultural Hall. After arriving at the church, the members were called to order by the President.

Dr. Bronson offered the following as an amendment to the by-laws:

"Resolved, That the Committee on Ethics, to consist of seven members, be elected by the Nominating Committee."

The President said this would have to lie over for one year. The author of the proposed amendment then desired to have it offered as a resolution.

The Chairman decided that, the committee having already been appointed by him in accordance with the existing law on this subject, the resolution could not take effect for another year.

Dr. Bronson.—The resolution need not lie over because of anything contained in the constitution, but it will lie over in its effect; that is to say, the committee appointed under it will perform the functions of their office next year, and not to-day.

The President then put the motion of Dr. Bronson, and declared it lost.

The justice of this decision was questioned, and the President then put the appeal to the house. Before the result was announced, Dr. Bronson said, "There has been a doubt expressed, and I should like to state to the Association my reasons for offering that resolution."

President Vandell.—The decision of the Chair was appealed from, the vote was put, and the Chair decides that the Chair was sustained.

Dr. Bronson, however, insisted upon making an explanation. The Chairman permitted him to speak, though in violation of the rule.

Dr. Bronson said, "I was about to say that, at the organization of this Association, the questions which came before the Committee on Ethics were of very little interest to a large portion of this convention. The committee was considered of so little importance that it was not originally a part or parcel of our constitution or by-laws; but within the last few years, every gentleman who is familiar with the acts of this Association is aware that discordant elements have been introduced here, which have consumed time and produced friction in this body; and it has been owing in part to the fact that the presiding officers of this Association have exercised their undoubted right by indicating of whom that committee shall consist. If the President of this Association had any special predilections on this or that question, he would be very apt to appoint a committee in sympathy with him. Hence it is that dissatisfaction has been produced among a large number of the delegates. With the view, therefore, of correcting that evil, it has occurred to me that if each State and Territory had a voice in the formation of that committee, the difficulty would be removed; that it would prove a balm and a poultice to this Society, rather than an element of discord. This was the object I had in view when I introduced this resolution; not that I had anything to say against the action of any of our Presidents, for they have all acted as I would, no doubt, have acted myself."

The President said he would put the question to the house again, so as to show perfect fairness. He did so, and again decided the resolution lost.

A division was called for, and 167 voted in favor to 187 against the resolution, which was again declared lost.

Dr. N. S. Davis, of Chicago.—I hold in my hand a preamble and resolution. In passing it, it seems to me that it would be calculated to do good in at least one section of our country; and I can see nothing in it that any man could object to.

[This resolution will be found in the report of the Committee on Ethics.]

Dr. Davis.—I would move that the resolution be adopted, simply because I deem it worthy of our action. I am sure that as the Massachusetts Association is carrying the matter now to the civil courts, if we can give them a word of encouragement it will be of service.

Dr. Baldwin moved to refer the matter to the Committee on Ethics. It was so referred.

Dr. Francis Gurney Smith, of this city, chairman of the Committee on Publication, presented his report. It set forth that 750 copies of the Transactions of the Society had been published, at a cost of \$1549.39. Of these, 475 volumes were distributed to members, including 23 to various medical journals, and 88 copies are still due to members. The work was completed and issued early in November. The report concluded by reminding the members of a resolution passed in 1870, that all members who failed to comply with the rules of the Association within one year forfeited their right to a copy.

Dr. Caspar Wister, of Philadelphia, Treasurer of the Association, reported that the Association last year exercised a praiseworthy discrimination in the selection of the material furnished for publication, and consequently the volume of Transactions was smaller, more compact, cheaper, and more desirable to the profession than heretofore. The edition was published at a price which leaves a balance on hand for the use of the Association when it may hereafter become forgetful of its prudence and refer a great mass of manuscript for publication. The Treasurer counselled care in the adoption of prize essays, for out of this has arisen a considerable expense. The treasury is depleted annually to the extent of \$200, which it can ill afford. The account current shows a balance in hand of \$1005, being about \$300 more than was in hand last year. The Treasurer asked the Association to bear in mind that there are no discretionary powers vested in the Committee on Publication. They must publish everything which is referred to them by the Sections. Referred to the Publication Committee.

The Chairman took this occasion to suggest, for the consideration of the house, in addition to the view just presented by the Treasurer, that if there is a remedy for the evil complained of it should be adopted. "The result of the present action is, that we pay for a thing the real value of which we have known for a long while."

Dr. J. S. Weatherly, of Alabama, chairman of the Committee on Medical Education, presented a report, which, he said, was signed by Dr. J. M. Toner and himself. The committee recommend an appeal, to be addressed by the Association to the different authorities, asking that no more charters be granted by State legislatures to colleges which do not adopt the plan to be hereafter recommended by this Association, and that all colleges now in existence which do not fulfil the requirements of this standard forfeit their charters. The committee also recommend the scheme of Dr. Bartlett as feasible and practicable. An institution founded upon his plan would soon regulate all other medical institutions in this country. The committee further suggest the establishment of a national Academy of Medicine, as recommended by Dr. Moses, of Missouri; it urges that the Association take into serious consideration the expediency of publishing a monthly journal, under the auspices of this body, instead of the annual volume of Transactions, as heretofore published. The editor is to be elected annually by the Association. "It is confidently believed that not only the profession, but also the people, would be favorably influenced by this means, as the journal would be read by many who never see the Transactions." The committee recommend that the Association take decided action to make itself felt as the head of the profession in the United States, by demanding a proper standard of membership, and by publishing to the world that colleges which do not observe certain rules shall not be entitled to representation. The

committee urge that a congress composed of delegates from the medical colleges assemble to fix upon some uniform and improved plan of medical instruction, which shall be recognized as the only system of medical instruction in this country. Referred to the Publication Committee.

Dr. F. A. Ashford, the Librarian, reported that the increase in the library of the Association had been considerable. He suggested that the volumes of the Transactions now on hand be placed in his hands, to be exchanged for books upon other subjects. No money had been received by him. Referred to the Publication Committee.

Dr. Francis G. Smith, of Philadelphia.—In the absence of the chairman of the Committee on Prize Essays, who is detained at home by a sad bereavement in his family,—the death of his son,—and who has commissioned me, as the second member of his committee, to act in his place, I will present the report to the Association. Four essays were submitted to the committee; of these, one was withdrawn by its author, and the remaining three were carefully examined by the committee. Two of them did not fulfil the conditions which are to determine the disposition of the prize. The third one did,—that is, it presented the condition of original research. The title of that essay is, "What Physiological Value has Phosphorus as an Organismal Element?" and it bears a Latin motto,—"*Ne tentes, aut perice.*" The name of the author is Samuel R. Percy, of New York City.

Dr. T. Parvin, of Indiana, chairman of the Committee on Medical Literature, reported that he had addressed a letter to each of his four associates,—Drs. J. P. Whitney, of California, G. Mendenhall, of Ohio, H. Carpenter, of Oregon, and L. P. C. Garvin, of Rhode Island. He received replies from the two last-named only. Dr. Carpenter said he had nothing to communicate. Dr. Garvin sent a long letter, which was read, and which contained observations in reference to the national literature and suggestions for its improvement. The writer asserted that we have an American medical literature of which every one should be proud. This very city has produced works which would make quite a library of themselves, and without which no medical library, however vast and various its volumes, would be complete. The names of four of the living authors of Philadelphia who specially deserved mention are George B. Wood, Hugh L. Hodge, Isaac Hays, and Samuel D. Gross. Our literature, he says, is practical in character. Although we may boast of the grace and beauty with which Dr. Chapman clothed his thoughts,—of the flashing declarations of the late Dr. Meigs,—of the calm dignity and ornate periods of Dr. Wood,—yet generally our American authors give less heed to language than to ideas. If an author wishes to catch the ear of an American physician, he must have something useful to say, and must say it quickly. The committee favored the idea of offering a triennial prize of six hundred dollars for the best essay, instead of the present plan of giving two hundred dollars to be divided between two each year. They suggested that the chairman of each Section deliver an address to his Section, as likely to relieve some of the irksomeness of listening to dry essays. A large portion of this report was devoted to advocating the publication of a national monthly journal, under the auspices of the American Medical Association. Referred to the Publication Committee.

Dr. J. D. Jackson, of Kentucky, chairman of the Committee on American Medical Necrology, submitted his report, which was referred to the Committee on Publication without being read.

Dr. Stetler, of Pennsylvania, presented the following:

"*Resolved*, By the American Medical Association, that no report or paper which is referred by it to the various Sections shall be referred by the latter to the Committee on Publication without first having been examined and approved by two-thirds of the members present at said Section."

This was discussed by several members, and was finally indefinitely postponed.

In the evening a lecture was delivered by Dr. H. D. Noyes, on "The Relation of Disease of the Inner Structure of the Eye to other Affections of the Body," illustrated by ophthalmoscopic pictures in the magic lantern, in the chemical lecture-room of the Medical Department of the University of Pennsylvania.

At eight o'clock, Professor Robert E. Rogers gave a brief

lecture, with demonstrations of electrical phenomena, in the same hall.

The delegates, with the ladies who accompanied them, then proceeded to the residences of Dr. William H. Pancoast and Dr. Hugh L. Hodge, where they were hospitably entertained.

By invitation of Dr. Addinell Hewson, one of the Attending Surgeons, the delegates visited the Pennsylvania Hospital on Thursday to witness the operation of amputation of the hip-joint.

Third day's proceedings.—The Secretary read the following, which was adopted in the College of Physicians, in Philadelphia, May 1, 1872:

"*Whereas*, Cases of accidental poisoning and of the internal administration of medicines intended only for external use are so frequent; and

"*Whereas*, Every possible safeguard should be employed to prevent such accidents; therefore

"*Resolved*, That it is recommended to all druggists to place all external remedies in bottles not only colored so as to appeal to the eye, but also rough upon one side, so that by the sense of touch no mistakes shall be possible even in the dark; and that all bottles containing poison should not only be labelled 'poison,' but also with another label indicating the most efficient and convenient antidote."

Dr. Sayre, of New York, moved to adopt these resolutions. Agreed to.

Dr. Alexander W. Stein, of New York City, presented the following:

"*Whereas*, It has long been recognized that diseases of a dangerous and fatal nature are transmissible from animals to man, and that certain zymotic affections, which are common to both man and animals, do very frequently manifest themselves first in the latter and subsequently in man, thus warning us that to be indifferent to the condition of the inferior animals is to introduce and create centres of disease among ourselves; therefore,

"*Resolved*, That a committee be appointed to ascertain what measures can be instituted to prevent the extension of such diseases to man, and what sanitary measures can be effected to arrest the progress of such diseases in animals, the committee to report next year."

* This was adopted.

Dr. Francis G. Smith, chairman of the Committee on Nomenclature of Diseases, reported that, in accordance with instructions given to them by the Association in 1870, they had prepared a nomenclature to be adopted and observed by the practitioners of the United States.

The report had appended to it the following:

"*Resolved*, That the report of the Committee on Nomenclature of Diseases be referred to a special committee of five members, to be appointed by the President, who shall examine it and report upon its final disposition at the present meeting of the Association.

"*Resolved*, That on the favorable report of said committee it shall be referred back to the Committee on Nomenclature for the preparation of an index."

Dr. Woodward, of Washington, offered a minority report, which mainly differed from the report of the majority of the committee in the resolution appended.

The minority report that, while they have the highest respect for the ability and learning of those members of the committee whose residence in Philadelphia has enabled them to attend to its meetings and aid in the production of the report just read, they nevertheless feel it a duty to express their earnest convictions that the adoption of a nomenclature and a classification by this Association is a matter of too great importance to be acted upon hastily, and before any of the members of the Association, except a part of the committee, have had any opportunity to examine for themselves the nomenclature and classification which it is now proposed that we shall adopt. The minority of the committee had no opportunity to examine the proof-sheets of this work until the commencement of the present meeting.

The resolution accompanying the minority report was as follows:

"*Resolved*, That the nomenclature and classification just submitted by the committee be published in the Transactions; that one thousand extra copies be printed in cheap pamphlet

form and distributed to the profession; and that the question of the adoption of the nomenclature and classification by this body be postponed until the next annual meeting."

The minority report was adopted, after considerable discussion.

Dr. Wm. O. Baldwin, of Alabama, chairman of the Committee on Nomination, reported that the following officers had been selected to serve during the ensuing year:

President, Dr. Thomas M. Logan, of California.

Vice-Presidents, Drs. B. H. Catlin, of Connecticut; McPheeters, of Missouri; Pollock, of Pittsburgh; and Briggs, of Tennessee.

Treasurer, Dr. Caspar Wister, of Philadelphia.

Librarian, Dr. William Lee, of Washington, D.C.

Permanent Secretary, Dr. William B. Atkinson, of Philadelphia.

Assistant Secretary, Dr. Montrose A. Pallen, of St. Louis.

Committee on Library, Dr. J. M. Toner, of Washington, D.C.

The place of the next meeting—St. Louis, Missouri.

The report of this committee was adopted.

Dr. T. M. Logan, of California, chairman of the Committee on a "National Health Council," made a long preliminary report, and asked to be continued and to be constituted a special Section on State Medicine and Public Hygiene, to which all subjects cognate thereto may be referred. Agreed to.

Dr. Askew, from the Committee on Ethics, presented a report, which was read by Dr. Davis.

In relation to the preamble and resolutions offered by Dr. Davis touching the Massachusetts Medical Society, the committee recommended them for unanimous adoption by the Association. They are as follows:

"Whereas, It has been represented that the Massachusetts Medical Society considers that its delegates to the annual meeting of the American Medical Association in Washington, May, 1870, were unjustly excluded by the Committee of Arrangements; and

"Whereas, The action of the Committee on Ethics, at the same meeting, in refusing the right of said Committee of Arrangements to exclude the Massachusetts delegation, is not yet fully understood by that Society; therefore,

"Resolved, That the Association acknowledge the great and effective efforts of the Massachusetts Medical Society to elevate the profession and to suppress quackery of all sorts, and especially assure that Society of encouragement and support in its present exertions to rid itself of all pretenders."

This was agreed to by the Association.

The committee reported in regard to the official communication of the Corresponding Secretary of the Medical Society of the District of Columbia, certifying that Drs. Bowen, Bond, Williams, Crouse, Phillips, and others have forfeited their membership in that Society by reason of not having paid their dues for three years, and after repeated notice of the fact and its consequences, that it recommends that their names be stricken from the roll of membership; and also the same action in regard to Dr. D. W. Bliss, who is under sentence of expulsion from that Society. Unanimously adopted.

In regard to alumni associations of medical colleges, the committee reported that it does not consider them such medical societies as are intended by the constitution to be eligible for membership; and hence they recommend that no delegates be received from any of the alumni associations of any of the medical colleges from any part of the country. Unanimously agreed to.

In regard to the Pathological Society of Berks County, Pa., the registration of whose delegates had been postponed on account of the protest alleging the want of good standing on the part of that Society, the committee postponed action, from the want of proper evidence.

The committee offered the following:

"Resolved, That members of the profession hired by the month or year for definite wages, by families, railroads, manufacturing incorporations, or any money-making institution whatever, for ordinary surgical or medical practice,—always excepting eleemosynary and charitable institutions and hospitals,—are to be classed as irregular practitioners, and, therefore, disqualified for membership in this Association or in State or County Societies."

Dr. Weatherly moved to refer this question back to the State Societies. Agreed to.

In regard to the Academy of Medicine of Washington, D.C., the Freedmen's Hospital of the District of Columbia, and the Howard University of Washington, D.C., the registration of whose delegates had been postponed by the Committee of Arrangements on account of want of good standing on the part of those institutions, as indicated by the action of this Association in 1870 and 1871, the committee reported the facts as follows: First, that this Association, at its meeting in San Francisco in 1871, by the emphatic vote of 83 to 26, refused to so amend the constitution as to admit delegates from colleges in which women are taught and graduated in medicine, and from hospitals in which women, graduates in medicine, attend. Second, that this Association, in 1870, declared, by an almost equally emphatic vote, that a medical society constituted in part by members who were not licensed to practise in accordance with the civil law governing such cases in certain States, is not entitled to representation in this Association. Third, that Sections 3, 4, and 5 of the Act of Congress passed July, 1838, incorporating the Medical Society of the District of Columbia, and which has been the law regulating the practice of medicine in that District up to the present time, require all persons coming into the District to practise medicine to apply for, and within six months obtain, a license to practise from the Board of Examiners; and to effect that purpose make it a misdemeanor, accompanied by a fine of fifty dollars, to practise without such license. Fourth, that it has been proven by the testimony of several witnesses that the Medical Society of the Academy of Medicine of Washington now contains in full fellowship at least four or five members who have never applied for and obtained licenses to practise, and yet are actually practising medicine, and three of whom are on the list of delegates sent by that Society to this Association; also, that one of them is a member of the medical staff of the Freedmen's Hospital, and also that several of the faculty of the Howard University are members of the same Academy of Medicine, and one of the teachers is a woman.

In view of these facts, the committee cannot regard either of the three institutions named as in good standing, whether tested by civil law, by the former decisions of this Association, or by its code of ethics; and hence the committee recommends that the delegates from those several institutions be not admitted into this body.

Dr. Rayburn.—In regard to this question, it seems to me one of the most important that has ever come before the American Medical Association, because it involves, not the right of a few persons only, but it embraces indirectly certain subjects which concern the future welfare and even the existence of this Association. As our system in Washington is different from that of any other part of the country, I ought to say a word about it. There is in the District of Columbia a medical society whose charter authorizes it to give a license to every applicant, either upon examination or upon the exhibition of a diploma. This Society, in the exercise of this right, has claimed in each case the sum of ten dollars. The members of it claim that it is legal to license not only regular, but even irregular, practitioners, and they have licensed homœopathic practitioners.

Dr. Tyler.—Can the gentleman name a homœopathic practitioner?

Dr. Rayburn.—I can, sir. Dr. Piper, who died some time ago, had a license.

Dr. Tyler.—Well, he is dead, and his certificate died with him.

A member said that Dr. Piper was a regular practitioner at the time he procured his license.

Dr. Rayburn.—I will state in regard to that matter that I have information from the censors of the Society that they would give, and were compelled to give, a license to every man who applied for one. I very much regret that this matter again comes up to-day. Two years ago we had an acrid debate on an allied topic. What is our offence? Take the instance of the Howard University. They claim to receive all who apply for medical education, without making any distinction as to sex or color. If this Association see proper to decide that institutions of that class shall not be represented, of course it has the power, and we must yield;

but, at the same time, gentlemen, before you commit yourselves to this course before the world, think what you are doing. The Medical Department of the Harvard University now receives and has graduated young colored men for the profession. Harvard also receives women; and yet you will not condemn them. I hope that the members of this Association will not vote upon this question until they can do so understandingly, because I believe that this is the real question underlying the whole of this difficulty,—that it is the real origin of all this opposition.

I may say of myself that I have never since the time of our last meeting had anything to do with the old Society. I had thought and hoped that the old enmity had been buried, and I came here expecting no dispute. I was assured by old members of this Association that there would be no opposition. I see before me men of the highest talent,—some of the greatest men of our profession. Will they commit themselves to the idea that only a certain class of men shall be admitted? We may consider that women should not practise medicine, but have we the right to exclude them? Every human being should have the right to the very highest development that God has made them capable of [applause], and I had hoped that the American Medical Association would properly understand the real bearing of this question.

In regard to the candidates who have been refused admission from the Academy of Medicine, I may say that this academy was founded for the discussion of medical topics, and we who had belonged to the old Society, and had worn that yoke until it galled us, joined the new one that we might express our opinions freely. There is an aristocracy of medicine in the District of Columbia that does not exist anywhere else in the world. I have no doubt it is true that there are some members of the academy who have not yet received a license from the old Society.

If that licensing board was a protection to the practitioners in the District of Columbia, we would be in favor of it; but these men openly admit that they would be compelled to issue a license to every irregular practitioner who is the possessor of a diploma, no matter how he received it. We formed our new Society for mutual improvement; and had we not that right? I cannot think that you will stultify the whole record of the profession by standing upon such a basis as that. We have subscribed to the code of ethics of this Association, and all our members are graduates of regular medical schools, and, I think, are entitled to representation in this body, just as much as any other member in it. The doctors in the Freedmen's Hospital are regular graduates in good standing. The colored physician there is a graduate of a college in Cleveland, Ohio.

The members of the Society of the District of Columbia, so far as I know, have never dared to prove the legality of their charter by the exaction of any fine. Moreover, the whole thing has been declared to be illegal. Chief-Justice Carter, in a decision in the case of a man who was sued for the penalty required by this Society, stated that although he believed the indictment was irregular, and he quashed it on that ground, there were about forty other reasons why the indictment could not stand. He said he did not believe that the legislature had the right to endow a corporate body with the right to impose a fine for practising medicine without a license.

Dr. Rayburn, having consumed the ten minutes accorded to him by the rules of the Association, was allowed five minutes longer. When he had concluded, Dr. Busey, of the District of Columbia, said:

"I would not have had anything to say on this question, if Dr. Rayburn had not assailed the Society which I represent. The first charge he makes is, that it issues licenses to irregular practitioners. If any member will examine the Act of Congress which prescribes that that Society shall issue a license to any man who presents a diploma from a regular chartered institution, or who shall pass a regular examination by its board, I think he will agree with me that they have no right to withhold a license from any one who presents such qualifications. It may be that they have granted licenses to homœopaths; if so, they have presented diplomas from some regular school in this country. But I assert that no man has ever been licensed to practise homœopathy, or any other irregular system, who had to submit to an examination by its board. But let

me ask Dr. Rayburn if he is not a member of the Department of Sciences of the Academy."

Dr. Rayburn.—I will state that I have never attended a meeting—

Dr. Busey.—I want a direct answer.

Dr. Rayburn.—I was elected to that Society about a year ago, but I never attended a meeting.

Dr. Busey.—Now I will ask if the homœopaths are not elected members of that body.

Dr. Rayburn.—I will state that it is not a medical body.

Dr. Busey.—It has sent delegates to this body, and the only reason that it has not sent delegates here this year is that they knew we were ready to meet them. One of them did come; but when he found we were ready to meet him he put his hand in his pocket, which was full of credentials, and presented us with one from another place.

Dr. Rayburn.—I have nothing whatever to do with that Society.

Dr. Busey.—He then admits that it does elect homœopaths. Now I will ask him if one of the Professors in the Howard College is not a member of that Society, and if he was not sent here as a delegate from that Society.

Dr. Palmer.—I acknowledge—

Dr. Busey.—That is all; I do not want any speech.

Dr. Palmer.—I protest that the gentleman has no right to call me out and then deny me the right to explain. I will simply say that that scientific body has a charter from Congress, and it has no right to representation here. It has been so decided; and I have presented no credentials, and I do not know that any one else has presented credentials, from it. That is entirely another issue,—a question which has nothing to do with this case. In regard to the Howard University, I have the honor of being a Professor in that institution, and I hope to be heard in reference to it to-day. There is a cloud darkening over it which seems to obscure the minds of some of the profession here, and I hope that that cloud will be lifted.

Dr. Busey.—I simply want to show the fact that here were two Professors in the Howard University who were members of a Society which admitted homœopaths to membership, and I throw this out to meet the charge they have brought against the Society which I have the honor to represent.

Dr. Palmer.—This Society admits clergymen, and men of all professions.

Dr. Busey.—The gentleman shall not escape under any quibble. It has various Sections, and I refer now to the Section on Hygiene and Medicine. The second allegation is that the Society charges a fee, and that it uses that fee for a certain purpose. The charter says that it shall charge a fee of ten dollars. That fee, in part, goes to pay the expenses of the Society, but mainly to pay for the diplomas; and I will venture to say that from 1819 down to the present time there has never been a charge made that a single cent of this money was used for any other than legitimate purposes. The next charge is that the profession in Washington is an aristocratic one. I do not know what the gentleman means as the distinguishing feature of aristocracy. So far as the licentiates of the Society of the District of Columbia are concerned, the applicants have all been licensed without regard to color, and without a word, without a negative vote. There is no question now, as there was not in 1870, of caste involved in this issue. It is a question of civil law; it is a question of ethics. The members of the Academy of Medicine have not complied with the law of the land; they are practising medicine in Washington without being licensed by the Society of the District of Columbia. This is a very important question for us to decide. Many of the men who were excluded in 1870 because of this construction of the law, have since complied. The National Medical Society, which was then the organization against which we objected, died; but many of its members, with others, organized what is now called the Academy of Medicine; and it has pursued the same course, though to a less extent. The profession of the District of Columbia does not appear here as a prosecutor; this question has arisen in your Committee of Arrangements. In respect to the last charge, that this law of Congress is illegal, I will say that I supposed the Supreme Court of the United States was the only tribunal which could settle such a question. He says this Society has never maintained its right. It has not, for the simple reason that this

Society does not desire to be eternally drawn into court; it prefers to leave such questions to a body capable of deciding them,—that is, to you. If the decision of 1870 is adhered to, I venture to say that in 1873 we will meet together in St. Louis without being disturbed by these issues.

Dr. Bronson, of Massachusetts.—I would like to ask the doctor one question,—namely, Whether physicians of color have received licenses to practise from his Society?

Dr. Busey.—They have.

Dr. Bronson.—And whether the question of color has anything to do with the question of license from your Society?

Dr. Busey.—None whatever.

During these conversational remarks, the members in several parts of the house were crying "question," and some were apparently trying to prevent discussion by hissing and otherwise making a noise. The President soon obtained order, and it was then proposed to adjourn until an early hour in the evening, in order to allow the question to be freely discussed.

Dr. Hartshorne said that there was no certainty that the church could be obtained during the evening.

Dr. Sayre, of New York.—We have heard both sides fully, and we are now ready for a vote.

The cries of "question" were again heard all over the house, and several members rose to make motions.

President Vandell.—Gentlemen, you must, first of all, sit down. The Chair must be sustained in its efforts to preserve order in this Association. (Applause.) No matter what the question, and no matter how excited the gentlemen may grow upon it, this Chair intends, with the support of this Association, to preserve order. The Chair decides that Dr. Palmer has the floor.

Dr. Palmer, of Washington, D.C.—I will try to be brief, gentlemen, in explaining to you the position of the Howard University and my position as professor in that institution. It has been said that I am practising medicine in Washington without having obtained a license from the Society of the District of Columbia. I am not a licentiate of that Society. I have lived in that city but eighteen months, and then only while I lectured in the university during the winter, going North in the summer. I have never practised medicine there except in my own family and a few of my neighbors': have never put out my sign, and never taken a fee. In 1866, Congress granted a charter to the Howard University of the most extended character. They have, under that charter, organized departments of law, theology, general science, and literature and medicine. The medical department has seven professors,—two from without and five from within the District,—and they are all licentiates. They have obeyed the code of ethics of the American Medical Association. We are charged in this report with admitting females as students, and it is said that we have a female teacher in our faculty. We have no such thing in our faculty. The trustees have employed a lady as ophthalmologist, and they have asked her to come down and lecture in the university. She is not a professor.

Dr. Busey.—Is not this lady also a member of the board of surgeons in a public hospital in which certain members of your faculty are consulting physicians and surgeons?

Dr. Palmer seemed to admit this, but gave no direct answer.

Prof. Gross.—The report of the committee does not say that this lady is a professor; it says she is a teacher.

Dr. Palmer.—She is a teacher there, and she is a lady who is distinguished for her ability as a lecturer in that department. The question then really before us is whether ladies are to be debarred from teaching and studying medicine. The colored man is also one of the elements underlying this matter. When I presented myself here as a permanent member, I was told by the secretary that I could not be registered. I have been a member of this Association for more than fifteen years, and the organic law of the Association is that a permanent member of it may register his name, and if there are accusations to be brought against him he has a right to defend himself. I was not permitted to register, and late on the second day of this session I was informed that charges had been preferred against me. Now, sir, I want to know what I have ever done in this world that is in conflict with the code of ethics, except that I have accepted a position as professor in an institution which admits colored gentlemen and which admits ladies.

Dr. E. Hartshorne, of Philadelphia.—I rise to a question of

privilege. I have to contradict the charge made by Dr. Rayburn in the directest sense. He says he came here without any warning as to the treatment he would receive. I sent a letter to him on the 1st of May, in which I gave him notice of the sentiments of the committee of arrangements, and asked him to notify every member applying for admission who was concerned in the movement. I have in my possession the reply of Dr. Rayburn, in which he acknowledges the receipt of that note.

This speech was followed by applause and still greater confusion than before. Loud calls were made for the previous question, to which the President paid no attention, but rapped violently with his gavel and ordered the noisy members to sit down.

Dr. Rayburn said that he had been misunderstood; that he had received Dr. Hartshorne's letter, but too late to notify the delegates, some of whom had already left the city.

Prof. Gross.—I rise to a point of order. The previous question does not admit of discussion.

The din of raps and voices was kept up for some time, until the President at last succeeded in obtaining perfect order. He then decided that the call for the previous question was in order. This was properly seconded, and the main question—the acceptance of the report of the committee—was carried by a very large majority. The Association then adjourned.

During the evening the delegates were entertained by Thos. A. Scott, at his residence on Rittenhouse Square.

Fourth day's proceedings.—The President appointed the following committee in reference to the publication of a national medical journal: Drs. Pollock, Westmoreland, Talley, Walker, Jackson, Weatherly, and McGuire.

A paper on Yellow Fever, written by Dr. Jones, was sent back to the Association from one of the Sections, as being too voluminous for publication. There was a long discussion as to what disposition should be made of this document.

Dr. Davis, of Chicago.—This subject is one of vital importance to the scientific part of this Association. I deem it at the very foundation of the scientific value of the Association, and hence I am anxious to get the Sections to understand what seems to me the only feasible mode of disposing of papers. The true course is to have such papers referred to a sub-committee of the Section. The author of a paper must, in the first place, inform the Section to which it belongs, thirty days beforehand, that he is going to offer it; then, when the Section comes together, it must take the responsibility of putting the paper in the hands of a committee that will examine it and make the necessary recommendation. If a writer presents a paper which is large enough for a book, and if it is meritorious, let the Section return it to him with the recommendation that he get it published, with the endorsement of the Section. If the paper is a very short one, and one that would be creditable to a national body, then let the Section refer it back to its author, with the recommendation that he publish it in some medical journal, with the appendix that his paper has been recommended by his Section. We can thus limit our volume to subjects which are either new, or which possess special merits, and then it will be readable and salable.

On motion of Dr. Wister, the paper in question was referred to its author, with a request that he present it next year in time for the Section to examine it, or else that he reduce it in size.

The Secretary announced that the following special committees made reports, which would be published in the Transactions:

On the Structure of the White Blood-Corpuscles; Dr. J. G. Richardson, Pennsylvania, Chairman.

On National Health Council; Dr. Thomas M. Logan, California, Chairman.

On Nomenclature of Diseases; Dr. Francis Gurney Smith, Pennsylvania, Chairman.

On the Cultivation of the Cinchona Tree; Dr. Lemuel J. Deal, Philadelphia, Chairman.

Professor Gross recommended that the present system of appointing standing committees on Medical Education, Medical Literature, and Climatology and Epidemics, be abolished, as leading to no good result. His motion to substitute three lecturers to address the Association at its annual meetings on medicine, surgery, and midwifery, was laid on the table.

Dr. E. Lloyd Howard, of Maryland, presented a resolution

appointing a committee of three, to report, at the next meeting of the Association, a plan for a better arrangement of the Sections, and for the more rigid examination of the papers offered for publication. Agreed to; and the President subsequently appointed on the committee Drs. Howard, Bronson, and R. E. Rogers.

Dr. Askew, of Delaware, was requested to prepare suitable resolutions relative to the death of Professor Samuel Jackson; the resolutions to be printed in the minutes.

The thanks of the Association were returned to Dr. Pancoast, Dr. Hodge, Col. Thomas A. Scott, the press, the railroads, the medical societies, and others who had entertained and accommodated the members during their sojourn in Philadelphia.

Dr. H. F. Askew, of Delaware, offered a series of resolutions recognizing the estimable character, great learning, and valuable services of the late Dr. W. W. Gerhard, of Philadelphia. The resolutions were adopted by a standing vote.

On motion of Dr. Hartshorne, the names of Professors Dickson and Jackson received a similar testimonial.

Dr. Da Costa was appointed to prepare resolutions in respect to the memory of Dr. Dickson.

Dr. Skilman, of Kentucky, presented a resolution acknowledging the valuable services of Dr. William B. Atkinson as Permanent Secretary of the Association, and appropriating to him an annual salary of \$1000.

This was discussed at great length, and, on motion of Dr. Davis, it was at last agreed that, in view of the present prosperous condition of the treasury, he should receive from the Association \$500 as a token of their appreciation of his services.

On motion of Dr. Parsons, the name of Dr. P. D. Marmion, of New York, was ordered to be expunged from the register, and his case was referred to the Committee on Medical Ethics.

On motion of Dr. Baldwin, of Alabama, a special committee was appointed, with Dr. Sullivan as chairman, to consider the relations between physicians and druggists, and report at the next meeting.

Dr. Reese, of Brooklyn, offered the following:

"*Resolved*, That, while we admit the right of woman to acquire medical education and to practise medicine and surgery in all the departments, we deem the public association of the sexes in our medical schools and at the clinics of our hospitals as impracticable, unnecessary, and derogatory to the instincts of true modesty in either sex." Indefinitely postponed, without discussion.

Dr. Yandell announced that all the business of the session had been disposed of.

After thanking the members, in a short address, for their uniform kindness and courtesy toward him, he declared the meeting adjourned, to meet in St. Louis next May.

In the afternoon, those members of the Association who had so far prolonged their stay in the city visited Fairmount Park, and, in company with their ladies, partook of a collation which had been prepared for them at Belmont Pavilion.

The various means provided for the entertainment of the delegates to this convention were admirably successful in every respect. The Committee of Arrangements, who had this matter in charge, was composed of Drs. E. Hartshorne, *Chairman*, Richard H. Townsend, John H. Packard, William Pepper, F. F. Maury, James Tyson, S. W. Gross, D. Murray Cheston, *Secretary*. These gentlemen called to their assistance a Committee of Reception, which consisted of R. E. Rogers, *Chairman*, W. S. W. Ruschenberger, R. Bridges, B. H. Rand, F. G. Smith, Jr., Samuel Lewis, A. Nebinger, Caspar Wister, W. B. Atkinson, William L. Knight, R. P. Harris, H. Y. Evans, T. Hewson Bache, and thirty others. The receptions given by the Biological and Microscopical Section, by Thomas A. Scott, Esq., and by Drs. Hugh L. Hodge and William H. Pancoast,—the lectures by Prof. R. E. Rogers, Dr. H. D. Noyes, and Dr. J. Solis Cohen,—the excursion to Fairmount Park and the banquet at Belmont Pavilion,—have already been mentioned as forming a portion of the hospitable provision made for the pleasure of the guests by these committees. In addition to these, the visitors received cordial invitations from the numerous hospitals, the medical colleges, and the extensive manufactories of our city.

One of the most marked features among these diversions, however, was the large number of various and interesting objects exhibited in the hall of the College of Physicians,

which was thrown open from Tuesday morning until Saturday evening. Besides the vast library and museum already in the college, these committees had gathered together and displayed in the several rooms some of the most recent and valuable contrivances, devices, and discoveries pertaining to medicine, surgery, and kindred sciences, as well as many precious relics of ancient medical literature.

The west room of the museum was set apart for the display of philosophical apparatus. Prof. Rogers sent a Carré ice-making machine, Ladd's electro-magnetic, and several other similar objects. Prof. Rand was equally generous with the valuable instruments at his disposal. A spectroscope belonging to his collection was always the centre of a group of visitors. Dr. Cohen placed in this room some of his rare apparatus for demonstrating the properties of sound. The High School contributed some of its excellent models for teaching hydrostatics and pneumatics, and dealers in such articles sent from New York and Philadelphia a great variety of costly electro-galvanic batteries, telegraph-machines, etc.

The anatomical and pathological specimens were exposed in the east room of the museum. Dr. Turnbull furnished, among many other curiosities, the skeleton of an Indian squaw, with rings, beads, and bracelets, showing her high station when living. The army medical museum sent a Japanese manikin, two hundred and fifty years old, which was so unique and curious as to attract great attention. Prof. Leidy sent from the University a preparation showing a strange freak of nature, the transposition of all the abdominal and thoracic viscera. There were other preparations here, showing the great destruction of bones in railroad fractures, and models of the various parts of the body, among which several representations of the pelvis and its viscera were specially noticeable.

The lecture-room contained pharmaceutical preparations of every description, all of which were displayed in a pleasing manner. They were contributed by Philadelphia dealers and by the College of Pharmacy.

In the east room of the library were long tables loaded with innumerable surgical and optical instruments, and contrivances for hospital use, chairs for invalids, etc., were disposed in various parts of the room.

The west room of the library was devoted to the exposition of the curiosities of medical literature. One of the cases in this room contained contributions from Drs. Carson and Hutchinson, such as tickets of admission to the lectures delivered at the College of Philadelphia in 1772 and 1773, a volume of Dr. Kuhn's manuscript lectures, and many other interesting objects connected with the early history of medical teaching in Philadelphia, most of which formed the material from which Prof. Carson prepared his history of the Medical Department of the University of Pennsylvania. Another case contained old works upon smallpox and other diseases, most of them being from the library of Dr. Gilbert. Another contained manuscripts from the same source, and old volumes in Latin from the College library. The fourth case was set apart for such books as the School of Salernum,—the many different editions being variously and handsomely bound,—the writings of Hippocrates, and many other rare and ancient medical and surgical works.

Dr. Edward Hartshorne, in welcoming the members of the Association, said of this exhibition, "This collection is not large,—it is not as comprehensive as it might have been; and, although it neither pretends to represent the whole nor the latest advances in this city, still less of the country and elsewhere, yet it is a collection of which we have no reason to be ashamed. We are exceedingly grateful, as we are exceedingly obliged, to the contributors, and to our excellent committee, who have made the exhibition so successful as it has proved to be."

SCARLET EFFLORESCENCE ON THE SKIN PRODUCED BY THE EXTERNAL APPLICATION OF BELLADONNA.—Dr. J. G. Wilson, Professor of Midwifery in Anderson's University, reports, in *The Glasgow Medical Journal* for February, two cases in which a scarlet efflorescence on the skin, which was at first supposed to be due to scarlatina, was produced by the application of linimentum belladonnæ to the breasts, for the purpose of arresting the secretion of milk.

GLEANINGS FROM OUR EXCHANGES.

RUPTURE OF THE FEMALE BLADDER.—Mr. William Stokes (*British Medical Journal*, March 23, 1872) reports a case of rupture of the bladder in a female, caused by a fall downstairs while intoxicated. This accident occurs with much less frequency in the female than in the male,—principally, as suggested by the late Prof. Harrison, because the pelvis of the former is larger than that of the latter; and partly because the distended bladder in the female “does not incline so much backward as in the male. On the contrary, it enlarges more forward and in the transverse direction; while the uterus and its lateral folds may assist to break the shock of any external violence applied to the hypogastric region, and to prevent the direct concussion of the bladder against the sacral promontory.” M. Houel has collected (“Des Plaies et des Ruptures de la Vessie,” Paris, 1857) forty-five cases of rupture of the bladder, and of these only five occurred in females. Cases of recovery from this accident by males are recorded by M. Chaldecot, Prof. Syme, and Dr. Thorpe of Letterkenny; but Mr. Stokes knows of no instance of recovery from this injury when sustained by a female.

A CURIOUS OUTBREAK OF CHOLERA.—Dr. Fairweather has furnished (*The Lancet*, March 30) to the Lieutenant-Governor a report on a late remarkable outbreak of cholera at Delhi. It appears from his report that on November 26 a feast was given by a Righur, on the occasion of the death of his brother Doolah. The whole of the Righurs of the Mohulla, to the number of about four or five hundred, were present, but no others. The feast consisted of rice, moong-dall, sugar, and ghee. The two former were cooked in large copper vessels, and the sugar and ghee were added to them. No ill consequences followed till after midday on the 28th, when one or more began to suffer from sickness and purging. The total number affected was seventy; and of these, forty-four died. The disease was entirely limited to those who had partaken of the rice. After a thorough investigation into all the circumstances attending the feast, it was found that the rice, after having been cooked, was spread upon a mat laid on the floor of the room in which Doolah died, for several hours before being eaten. It was ascertained that Doolah had had a genuine attack of cholera, and had been repeatedly purged and vomited on the floor upon which the rice had been spread. The outbreak could not be traced to contaminated water-supply, and the symptoms were evidently not those simply of poisoning produced by copper.

YELLOW FEVER.—The English vice-consul at Ciudad Bolivar, on the Orinoco River, Venezuela, reports (*The Lancet*, March 30; from *Nature*) that an old woman had applied an efficacious remedy for yellow fever and black vomit. It is the juice of the leaves of the vervain plant, which is obtained by bruising, and is taken, in small doses, three times a day. Injections of the same juice are also administered every two hours, until the bowels are completely relieved of their contents. The medical men have adopted the remedy, and the number of fatal cases has been much reduced. The leaves of the female plant alone are used.

HEMORRHAGE RESULTING FROM AN INTERNAL WOUND OF THE ŒSOPHAGUS TREATED BY OPERATION.—Dr. Thomas Annandale reports, in the *Edinburgh Medical Journal* for April, a case of this kind. The patient, a lady who had been the subject of hemiplegia for several years, felt, when dining, a piece of chicken- or ham-bone lodge in her throat. The bone was detected by the probang, and gave rise to a good deal of distress. The next day, hemorrhage occurred. This yielded at first to styptics, but, as it again came on, it was determined to operate. A careful dissection was made, so as to lay bare the Œsophagus, with the result of exposing a wound of this canal. The wound was a quarter of an inch in length, situated on the left side, and passed completely through the walls of the canal. On searching more carefully for the source of the hemorrhage, a small branch was found entering the Œsophagus close to the wound. A ligature passed around this artery by means of an aneurism-needle, and secured at once, stayed the hemorrhage. The patient at first did well, but died on the

eight day from prostration produced by sloughing of the edges of the wound. Dr. Annandale believes that under more favorable circumstances the operation would have been successful, and that in the case reported it was the means of prolonging life for several days.

LEUCOCYTHÆMIA IN A PIG.—Bollinger (*British Medical Journal*; from the *Archiv für Tierheilk.*, 1871) has described the appearances met with in the necropsy of a pig which had been killed after an illness of four days. The spleen was enormously enlarged, and in a condition of general cellular hyperplasia. The kidneys were also much enlarged; and in the cortical layer, both superficially and more deeply, were numerous irregular effusions of blood. The tissue of the organs was weak and pale. The liver was almost twice the normal size; its parenchyma was pale. In both liver and kidneys there was diffuse fatty degeneration of the gland-cells, with abundant cell-proliferation in the interstitial tissue. In the lungs were found, scattered here and there, some masses about as large as hemp-seeds, formed of lymphoid cells. The relation of the white to the red corpuscles in the blood of the splenic vein was 1:4; in the renal veins, 1:5.

VASCULAR MEMBRANE OVER THE EYES.—Mr. Sebastian Wilkinson, at a recent meeting of the Pathological Society of London (*British Medical Gazette*, April 13), exhibited a child, both of whose eyes were covered with a congenital, thick, highly vascular membrane, which microscopically was found to be conjunctival. Removal of small portions had effected some relief.

MENSTRUATION FROM THE MAMMÆ.—Dr. P. Mynet reports, in the *Lyon Médicale*, March 17, 1872 (*Clinic*, April 20), the case of a young woman aged 17 years, who asserted that for eight months her menses had escaped every month through a fissure in the nipple, sometimes of one side, sometimes of the other. The loss of blood was sufficiently abundant, and continued for two or three days. The hemorrhage was preceded each time for a day or two by pain and swelling of the breast. She had never menstruated in the normal manner.

EPISTAXIS CAUSED BY VICARIOUS MENSTRUATION.—Dr. Otto Obermeier reports, in *Virchow's Archives*, March 15, the case of a woman aged 21 years, who had menstruated in the usual manner only once. Since then, at the menstrual periods she has had a good deal of pain in the lower part of the abdomen. There has, however, been no loss of blood from the genitals; but at the menstrual periods epistaxis had occurred, which generally lasted for three days. In March, 1870, the periodical epistaxis did not occur, in consequence of pregnancy; nor did it reappear until six weeks after the confinement of the patient, in December. Since then it recurred at regular intervals until August, 1871, when conception again took place.

AN EXTRAORDINARY CASE OF HYDROCELE.—In this case, which is reported by Dr. John G. Meachem, of Racine, Wisconsin, five quarts of a very dark, almost black serum were removed from the scrotum by tapping. Before the operation, when the patient was in the erect position the scrotum reached to within four inches of the knee-joint, and it was twenty-three inches in circumference. It was natural in color, smooth, semi-elastic, but not diaphanous. The penis was entirely obliterated, having been dragged, and presented simply an umbilicated depression at about the centre of the tumor. Fifteen years before he came under Dr. Meachem's care, he received a severe contusion of the testicle. Violent inflammation followed, which confined him to bed many weeks. He recovered; the scrotum, however, never resumed its normal size, but was free from pain or any inconvenience until about a year had elapsed, when it began slowly, but steadily, to increase, and had so continued until he presented himself for treatment. Since the first operation, tapping has been repeated six times,—never less than three pints of fluid, which is lighter in color than that first obtained, being removed at one time. The patient refused to allow any operation for the radical cure of the hydrocele to be performed.

ALBUMINOID DEGENERATION.—Cohnheim had the opportunity last year (*Virchow's Archives*, liv.) of examining the

bodies of three men who had been wounded during the Franco-German war. In each instance the wound gave rise to profuse and long-continued suppuration. Death took place in one case five months, in the second, six months, and in the third, seven months, after the reception of the injury. The post-mortem examination showed that the spleen in all three cases had undergone albuminoid degeneration; and in one, and perhaps two, of the cases, the kidneys. Cohnheim traced the albuminoid degeneration to the profuse suppuration.

ETHER AND PRUSSIC ACID.—Dr. Robert Amory, of Boston, says (*The Practitioner*, May, 1872) that neither prussic acid nor the cyanides cause any symptom of cyanic intoxication, if administered to an animal thoroughly etherized, until the commencement of recovery from etherization. Along with the symptoms of recovery from ether appear the convulsions produced by the cyanides; and these are followed by death.

INJECTIONS IN THE TREATMENT OF THE DISEASES OF THE ALIMENTARY CANAL IN INFANTS.—Dr. Otto Pollak (*Journal für Kinderkrankheiten* for May and June, 1871) has been recently making some experiments upon the dead body, which show that when a quantity of liquid not less than two fluidounces and not exceeding four fluidounces is injected into the rectum of an infant from eight days to four months old, some of it will penetrate as far as the cœcum. To prove this, he used injections containing starch, which was afterwards detected in the bowel by means of a solution of iodine. If a larger quantity than four fluidounces was used, some of it immediately came away alongside of the injection-tube. From the results of the experiments, he concludes that many of the intestinal diseases of infants may be benefited by local treatment.

MISCELLANY.

METEOROLOGICAL.—The mean temperature of the month of April, 1872, was 54°.27, which is nearly three degrees higher than the average of mean temperatures for the month since 1790. The highest temperature noted during the month was 85°, on the 26th; the lowest was 33°, on the 2d.

The quantity of rain that fell during the month was 2.56 inches, making a total for the year thus far of 8.4 inches; while during the first four months of 1871 the rainfall measured 14.3 inches. The average of the rainfall for the month, during the past thirty-five years, has been 3.82 inches.

A PROCESS FOR LIQUEFYING DEAD BODIES.—A certain M. Donac (*Lancet*, April 13) has recently laid before the French Academy of Sciences a project for liquefying dead bodies and transforming them into a syrup without color or smell. According to his calculations, a moderate-sized man could be got into six bottles. The size of each bottle is not stated, but the *Paris Journal* appears charmed with the idea, and exclaims, "What an opening for the exercise of filial piety!"

THE ASSOCIATION OF MEDICAL EDITORS OF THE UNITED STATES.—This Association met on Monday morning, May 6, at Horticultural Hall in this city. The following resolution was unanimously adopted:

"Resolved, That an annual prize of \$100 be offered by this Association for the best essay on some subject to be decided upon at each annual meeting, and the same to be open for competition to all medical editors belonging to this Association."

In accordance with this resolution, Drs. Dawson, Davis, and Stone were appointed a committee to recommend a subject for the prize essays of the coming year, and to nominate a committee to examine the same. The Association then adjourned until evening.

On reassembling, an address on the "Origin of Medical Science" was delivered by the President, Dr. B. F. Dawson, of New York. At the close of the address, the meeting adjourned.

THE LATE PROFESSOR JACKSON.—The Medical Faculty of the University of Pennsylvania, at a recent meeting, adopted the following resolutions:

"1. *Resolved*, That the announcement of the death of their venerable colleague Dr. Samuel Jackson, Emeritus Professor of the Institutes of Medicine, has deeply impressed the Medical Faculty of the University, and quickened the feelings of affectionate respect which they have always entertained for his person and character.

"2. *Resolved*, That to his genius in cultivating medical science, his eloquence in expounding its laws, and his earnestness in enforcing its precepts, the Medical Department of the University is deeply indebted for the fame it enjoyed and the influence it exerted during the long period of his professorship.

"3. *Resolved*, That his ardent temperament, genial disposition, and enthusiastic love of knowledge inspired all who knew him as associate or teacher with an ambition to follow in his footsteps, and adorn, as he adorned, the profession which he ennobled by his character and illustrated by his life-long labors.

"4. *Resolved*, That the Faculty will preserve the memory of Dr. Jackson's character and services as a model for the young to imitate, and a monument to be admired by all who reverence genius, and its practical results in enlarging the field of knowledge and in mitigating the pains and perils of disease."

R. E. ROGERS, M.D.,

Dean of the Medical Faculty.

THE LATE DR. GERHARD.—The Medical Board of the Pennsylvania Hospital passed the following resolutions:

"Resolved, We have heard with regret of the death of Dr. W. W. Gerhard.

"During the twenty-five years of his connection with the hospital staff, most, if not all of us have held towards him the relation both of pupil and colleague, and in that period have formed strong ties of friendship arising from his true goodness of heart and conscientious sense of duty.

"In this intimate intercourse, also, our admiration of his professional talent constantly increased; since he fully sustained the great reputation he acquired both in this country and abroad.

"Dying, he has left behind him a name among physicians such as few can hope to attain.

"Resolved, That we sincerely sympathize with his family in their affliction.

"Resolved, That a copy of these resolutions be sent to the family of the deceased."

WM. HUNT, Secretary.

MEDICAL CHARGES IN RAILWAY CASES.—An English judge recently took occasion to animadvert severely upon a Dr. Bolton, for saying that his charges for seeing the plaintiff in a railway case exceeded those which he would have made in the case of a private patient. *The Lancet* of March 16, in commenting upon the judge's course, says that the point is one not quite so easily disposed of as the judge seemed to think. A railway case gives an uncommon amount of trouble to a medical man, and takes up an unusual amount of his time. He has to regard it particularly in its forensic bearings. It is, therefore, only reasonable that he should receive a larger fee for a railway case than for a common one.

MOCK-DIPLOMAS.—The London papers contain a copy of a recent correspondence between Mr. Stillé, the Provost of the University of Pennsylvania, and Mr. Kortright, the British consul at this port. Mr. Kortright has been much annoyed lately by the receipt of letters from clergymen and others in various parts of the United Kingdom, requesting information with regard to certain degrees conferred by a college called the University of Philadelphia. He says, what we have always supposed was the case, that the similarity of the title has led many persons to suppose that it is identical with the University of Pennsylvania. Mr. Stillé furnished Mr. Kortright with copies of the existing regulations of the University of Pennsylvania in regard to honorary degrees, and of an act passed by the Legislature of this State prohibiting the sale of academic degrees, honorary or otherwise, under severe penalties; and these have been transmitted, together with the correspondence, to Lord Granville, of the English Foreign Office, and have at his request been inserted into the leading English newspapers. We hope that the medical press in England is now thoroughly convinced that the honored University of Pennsylvania has had nothing to do with this illegal traffic in diplomas, and that those who have been foolish enough to buy these degrees will put aside their meretricious honors.

It does seem, however, that the controlling spirits of the diploma-shops are not yet entirely crushed. Dr. Rogers and Dr. Rand, the Deans respectively of the Medical Faculty of the University of Pennsylvania and of that of the Jefferson Medical College, have received a letter of which the following is a copy:

"Dr. Rogers is confidentially informed that the Faculties of the University, Jefferson College, and Academy of Natural Sciences are liable to be indicted (and the probability of its being done has been talked of) under the law prohibiting the sale of academic degrees, a copy of which is hereby inclosed. The part in brackets [] applies to all of them, and the penalty is very severe.

"No diploma can be signed *after* money is paid or *before* it is paid (even the graduation-fee, for the law does not specify what money or state the amount, and this fee is really the *money paid for the diploma*). And, as those documents are not given away, the liability is complete as the law stands. It should be repealed, and a properly-worded or limited law enacted in its place. You have only until *April 4* to get it done. All diplomas signed since May 19, 1871, can be used to convict, and the books of the institutions can be produced in evidence. Escape is impossible under the law as it stands now, and therefore you should get immediate action by the whole Faculty of the University of Pennsylvania, in order to save them from being convicted and punished.

"MARCH 29, 1872."*

FALLACIES OF THE SENSES.—Mr. Spencer Watson has been lecturing in London on this subject, and by an ingeniously contrived model of an eye showed how floating bodies in the vitreous, such as blood-clots, membranes, and the like, might cast shadows upon the retina which would be projected outwards, as if images of external realities, and would thus explain the occurrence of certain spectral illusions.

MORTALITY FROM SMALLPOX.—The number of deaths from smallpox in Philadelphia during the weeks ending April 27

and May 4 and 11, 1872, were respectively 53, 35, and 50, of which 109 were of minors.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending		
	April 27.	May 4.	May 11.
Consumption	58	49	60
Other Diseases of Respiratory Organs	42	43	48
Diseases of Organs of Circulation	19	20	24
Diseases of Brain and Nervous System	81	66	68
Diseases of the Digestive Organs	28	27	23
Diseases of the Genito-Urinary Organs	3	3	6
Zymotic Diseases	67	47	77
Cancer	6	3	6
Casualties	8	9	23
Debility	37	35	31
Intemperance	0	3	0
Malformation	1	0	0
Murder	1	0	1
Old Age	17	11	9
Scrofula	1	0	2
Stillborn	15	19	17
Suicide	0	0	1
Tetanus	0	0	1
Unclassifiable	7	18	6
Unknown	5	1	4
Totals	396	354	407
Adults	184	171	203
Minors	212	183	204

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM APRIL 19, 1872, TO MAY 4, 1872, INCLUSIVE.

CAMPBELL, JOHN, SURGEON.—By S. O. 67, Department of Dakota, April 18, 1872, granted leave of absence for twenty days.

LORING, L. Y., ASSISTANT-SURGEON.—By S. O. 64, Department of the Missouri, April 19, 1872, to report in person, by the 10th of May, to the Commanding Officer, Sixth Cavalry, at the Summer Camp of the regiment near Fort Hays, Kansas.

CAMPBELL, A. B., ASSISTANT-SURGEON.—By S. O. 95, War Department, A. G. O., April 23, 1872, relieved from duty in Department of Dakota, and to report in person to the Surgeon-General.

NAVY NEWS.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY SINCE APRIL 20, 1872.

Assistant-Surgeon T. H. STREETS to the Naval Academy, Annapolis.

Surgeon-General J. M. FOLTZ placed on "Retired List."

Medical Director WM. GRIER to be detached from Hospital, Annapolis, on June 1.

Medical Director D. HARLAN to the Hospital, Annapolis, June 1.

Surgeon A. HUDSON to the Michigan.

Surgeon A. S. OBERLY from the receiving-ship Ohio to the Navy Yard, Boston, Mass.

Surgeon S. F. SHAW from the Michigan to the Naval Hospital, New York.

Surgeon Jos. HUGG from the Brooklyn, and waiting orders.

P.-A.-Surgeon J. B. ACKLEY from Navy Yard, Philadelphia, to the U.S.S. Brooklyn.

P.-A.-Surgeon F. M. DEARBORNE from the Naval Hospital, Chelsea, to the receiving-ship Ohio.

P.-A.-Surgeon J. W. COLES from the Ashuelot, and waiting orders.

P.-A.-Surgeon D. McMURTRIE from the receiving-ship Vermont to the Ashuelot.

P.-A.-Surgeon E. KERSHNER from the Naval Hospital, New York, and to the Navy Yard, Philadelphia.

Assistant-Surgeon JOHN C. WISE to the receiving-ship New Hampshire.

Assistant-Surgeon WM. M. NICKERSON from Navy Yard, New York, and to the receiving-ship Vermont.

* The following is the clause referred to:

"[and any person knowingly signing a diploma or other instrument of writing purporting to confer an academic degree when such consideration has been paid or promised to be paid, shall be guilty of a misdemeanor, and on conviction thereof be sentenced to pay a fine not exceeding five hundred dollars and to undergo an imprisonment not exceeding six months, or both, or either, at the discretion of the court.]

"Approved May 19, 1871.

"(Signed)

JOHN W. GEARY."

SATURDAY, JUNE 1, 1872.

ORIGINAL LECTURES.

ON FIBROID TUMORS OF THE WOMB.

BY WILLIAM GOODELL, M.D.,

Physician in Charge of the Preston Retreat: Clinical Lecturer on the Diseases of Women and Children in the University of Pennsylvania, etc.

LECTURE III.

THERE is no cut-and-dried method of dealing with uterine fibroids: their treatment is essentially a combat with symptoms. For your guidance, a few broad rules may be given, but much must be left to your own good sense. You will have to act either on the defensive or on the offensive; and I shall therefore divide the treatment into the *palliative* and the *radical*. The former aims to accomplish the following ends: (a) To stay the hemorrhage; (b) to allay pelvic pains and uterine colic; (c) to lessen the inconveniences arising from the weight and bulk of these fibroids; (d) to check their growth.

To stay the hemorrhage is the most imperative of all the indications, and as such I shall dwell on it somewhat fully. A day or two before the one on which the menses are expected, relieve the precursory engorgement of the pelvic viscera by a saline cathartic, and put your patient to bed, where she is to stay during her sickness. Such rest—and I mean rest in the widest acceptation of the term, both functional and physical—will alone often work like a charm. If it fails, give a teaspoonful of the fluid extract of ergot every fourth, sixth, or eighth hour, according to the urgency of the symptoms. Ergot is here our sheet-anchor. In the interstitial variety it rarely fails to do good, but in the submucous it will occasionally increase the hemorrhage. Iced enemata and the application of warmth to the spine are important adjuvants to the foregoing treatment. Next to ergot, gallic acid is the most valuable hæmostatic. Given in large doses,—say twenty or thirty grains every second, third, or fourth hour,—I know nothing better to check the most alarming hemorrhages, either from the womb, as in menorrhagia, or from the bowels, as in typhoid fever. When serious emergencies of this kind arise, to give smaller doses is mere trifling. Any table-syrup will disguise its taste and reduce its bulk. Sometimes you will succeed best by combining ergot with gallic acid; and to this you must often add laudanum enough to allay the severe pelvic and uterine pains. Leeching or scarifying the cervix a day or two before, or even during, the menstrual flux, will relieve the local congestion, and very materially lessen the bleeding.

During the intervals between the menses, or between the intercurrent hemorrhages, some intelligent treatment must be adopted. To supply the waste of blood, iron in some form is indicated; not given alone, however, but in combination with such medicines as lessen the congestion of the womb. For this purpose, ergot and Indian hemp sustain the greatest reputation. Digitalis and arsenic have many advocates, and so has ipecacuanha. All these remedies must be given in doses as large as can well be borne. McClintock recommends small doses of the bichloride of mercury; and Spencer Wells, a free exhibition of an infusion of Vinca major,—the greater periwinkle of our gardens,—in the proportion of two ounces to twenty of boiling water. I have had no experience with it; but, with such a recommendation, it is worthy of trial. A favorite mixture of my own consists of equal parts of muriated tincture of iron, dilute phosphoric acid, fluid extract of ergot, and cinnamon-water. Of this, one teaspoonful is to be taken after each meal, in a wineglassful of water.

What are you to do if the hemorrhage is not checked by these means? Inject subcutaneously from two to four grains of ergotine, and if in fifteen minutes there is no response you may at once proceed in the usual way to tampon the vagina. But let me here say that it is far better to plug up the os uteri than the vagina, for you will then not only stay the existing hemorrhage, but will also, as you will shortly learn, lessen the tendency to future ones. For this purpose, either squeeze into the os the largest sponge-tent possible, or else, as Palfrey* suggests, expose the cervix by a speculum, hook down the anterior lip, and then, with a sound, pack little by little into the os and uterine cavity all that you can of a long and narrow strip of lint. First dip the lint into a saturated solution of Monsel's salt, and also, for convenience of removal, leave a short tail outside of the os. To this practice the objection has been made that the blood, accumulating in the womb, would force open the Fallopian tubes and escape into the peritoneal cavity. From spasmodic uterine contractions excited by the admission of air, this very fatal accident, it is true, happens so frequently after nicking an imperforate hymen, as to make that operation a very dangerous one. But the locked-up menstrual secretions are tarry and uncoagulable; whereas the blood from a fibroid readily clots. Further, were the objection to the tampon valid in this instance, it would be so also in any case of hemorrhage from the non-gravid womb. Either sponge-tent or tampon of lint should be left *in situ* for twenty-four hours, but not longer, as by this time it will have become fetid. If necessary, a fresh one may then be introduced, to be removed after the same lapse of time. Of these two methods, I much prefer the former; that is to say, whenever the sponge-tent answers the purpose and the blood does not ooze past it. For it is a curious and an unexplained fact, that whatever dilates the cervical canal of a womb containing a fibroid tends to lessen the frequency and duration of the hemorrhagic attacks. Repeatedly, after using a sponge-tent, either for diagnostic purposes or as a tampon, have I seen the hemorrhages much diminished for weeks and even months.

To impress this fact upon your minds, and also to show you the worthlessness of unskilled assistants, let me speak to you a moment about one of our patients, whose attendance to-day I forgot to engage. She is thirty years old, six years married, sterile, and was reduced almost to translucency by a steady dribbling of blood from a submucous fibroid. Three months ago I passed up successively three sponge-tents before I could sufficiently dilate the cervical canal. Since their introduction she has gained in flesh and color, and has no hemorrhage other than that attending her menses. While I was introducing the last tent, a neighbor, who was holding a glass lamp containing kerosene, without giving us the slightest warning fell over backwards in a fainting-fit. My patient, having at that moment a base-expanding speculum in her vagina, could not move, but she made ample amends by uttering shriek after shriek in apprehension of an explosion. I first sprang for the lamp, that was rolling over the floor in a ball of flame, and, after getting my hands well scorched, succeeded in putting it out. I then groped for our assistant, who was doubled up against a chest of drawers, and soon brought her to with the contents of a pitcher. We all had a hearty laugh over this adventure, but it was cut short by my patient's going off into a violent fit of hysterics.

Let us advance a step farther; for, to combat this most formidable of symptoms, we must be armed at all points. You cannot keep a woman always tamponned, and yet, when you remove the tents, she may bleed as

* Medical Press and Circular, vol. vii., 1869, p. 516.

badly as ever. Inject now into the uterine cavity one or two drachms of the tincture of iodine, or of a saturated solution of Monsel's salt. This rarely fails. But you may ask me, If this is so effectual a remedy, why delay it?—why not resort to it at first? I answer, Because all intra-uterine injections, for reasons with which you are familiar, are attended with some risk; and doubly—yes, trebly—so, if the os has not been previously dilated.

Should the hemorrhage still keep on, or return, you must now permanently dilate the cervical canal to the extent of easily admitting your index-finger. This is done by incising the whole canal, either bilaterally with the hysterotomy, or at several points with a probe-pointed and curved bistoury. In performing this operation, it is best to expose the cervix by a speculum, and to steady the anterior lip with a small tenaculum. Whenever the cervix is thinned down, and the os reduced to a mere rim, a strong pair of curved scissors will readily slit its margin. In case the cervix is long and not at all effaced, my own practice is to try a graduated series of sponge-tents before resorting to the knife.

As intelligent men, you will demand the *rationale* of this operation. This I cannot give, for the resulting benefits are empirical facts, which you must take on trust. Some writers hold that large vessels are divided by this incision, and that an important supply of blood is thereby cut off from the tumor. This, however, does not explain the good effects of a sponge-tent. Others, that more room is thus gained for the tumor, and the veins are then relieved from the engorgement due to pressure. Finally, there are those who contend that the enlarged os, by furnishing an open channel, prevents such an accumulation of blood and mucus as might distend the uterine cavity and stretch open the mouths of its sinuses. Choose whichever explanation you prefer; to me, they all seem forced.

After such an incision of the os uteri, the hemorrhages will often remain for months in abeyance. But should they start again to any alarming extent, you hold in reserve yet another, and that the last plan. It is one devised by that distinguished ovariologist, Dr. Washington L. Atlee,* and one which he finds invariably successful. After well dilating or incising the os uteri, a long-handled bistoury, curved and probe-pointed, is passed up into the uterus as far as the guiding finger will reach, and then is drawn firmly down over the tumor, freely dividing its capsule and cutting into its substance to a depth of about half an inch.

Stripped of its power to bleed, a fibroid is shorn of much of its power to do harm; but there will remain for treatment pelvic pains and vesical and rectal tenesmus. Rest will also here prove of avail. When the tumor becomes too large for the pelvis, if not too firmly impacted or adherent, it must be dislodged and pushed up above the brim; and, by the way, this manœuvre has succeeded in putting a stop to an obstinate hemorrhage. To effect this, put the woman on all-fours, introduce two or more fingers into the vagina, and, for fear of exciting an attack of peritonitis, gently graduate the force to the resistance; bearing in mind that less will be needed if the tumor be pushed up by an upward and a lateral pressure, so that it may partly rotate on its axis, and thus rather skirt the sacral promontory than pass over it directly upwards. This spiral movement you will find extremely useful in the reposition of a retroverted womb, whether empty or gravid.

More commonly at the menstrual periods, but also at other times, the womb is excited to extrude the foreign body. These uterine colics will tax all your skill and tact. The early use of morphia by the mouth must be avoided, as that drug soon becomes a diet. Begin with

hyoscyamus or belladonna, or with vaginal suppositories of morphia and belladonna,—say, one grain of the former to two of the latter. I am indebted to my friend Dr. E. L. Duer for the following method of uterine medication, which you will find very convenient in country practice: A teaspoonful of glycerine, containing the anodyne, is poured into a hollow made in the centre of a thin sheet of cotton-wool not quite so large as one's palm. The edges being now gathered up and securely tied, there will be formed a small tampon, which the woman can herself pass up into the vagina. For convenience of removal, the ends of the string should be left long enough to hang out of the vulva. In very severe attacks of pain, a hypodermic injection of morphia will often be needed. On the whole, I think the cannabis indica is the best narcotic with which to begin your treatment; for it has the double property of relieving pain and of restraining uterine hemorrhage. You may sometimes be tempted to use the hydrate of chloral; but give it cautiously and watch its effects, for in my hands it has certainly increased the bleeding. Perhaps, by weakening the action of the vaso-motor nerves, this drug increases the calibre of arteries, and thus tends to excite hemorrhages.

To lessen the inconveniences arising from the weight and bulk of these tumors, various forms of pessary may be used. But they are available only when these fibroids are small enough to move about freely in the pelvic cavity. Whenever they are too bulky to sink very low into the pelvis, or, having been pushed up, you wish to maintain them above the brim, external support must be resorted to. An elastic belt, stiffened by slips of whalebone and kept in position by a perineal strap, will then give much comfort by relieving the pelvic viscera from pressure. Frequent baths will also assuage the vesical and rectal tenesmus.

To check the growth of these tumors, you will advise total abstinence from sexual intercourse, more or less of the recumbent position, loose dresses, a somewhat sedentary life, and a spare but wholesome diet. You will also give such medicines as are known to lessen the flow of blood to the reproductive organs. This class of remedies comprises ergot, digitalis, cannabis indica, borax, and the bromide and iodide of potassium. These may be given singly or in combination. Every means must be used to prevent portal and pelvic congestions. With this object in view, the contents of the bowels must be kept soluble, and rest strictly enjoined before, during, and after the menstrual flux. Broken-down constitutions fearlessly build up by vegetable and mineral tonics; by stimulants only very exceptionally. All growths thrive best in a cachectic soil.

Give comfort to your patient in her sore estate; brighten up her hopes, and above all distract her attention from self. The correlation between mind and matter is not the mere postulate of the metaphysician. Shrewd observers have noticed that too much heed given to any one organ determines the blood to it. It is not, therefore, by a mere coincidence that specialists, with the lucky exception of gynæcologists, are very likely to die from the very diseases which they treat. In a valuable communication to the *Journal of Mental Science*, on the "Influence of the Mind upon the Body," Dr. D. Tuke proves, by very forcible illustrations, that "Thought strongly directed to any part tends to increase its vascularity, and consequently its sensibility;" and, further, that "There is no sensation, whether general or special, excited by agents acting upon the body from without, which cannot be excited also from within by cerebral changes (including those associated with emotional excitement) affecting the sensory ganglia."

By these means, and by those previously enumerated, you will very generally succeed in tiding your patient safely over the perils of the menstrual period of her

* Trans. American Medical Association, 1853, p. 558.

life; and, the climacteric once reached, her future will thereafter be one of comparative comfort.

We come now to the radical treatment of these tumors; and here I cannot promise you so large a measure of success. Can a uterine fibroid ever be discussed by therapeutic measures?—is a question still agitated by the medical world. Out of a horde of discordant units it is not easy to strike a fair balance, but the weight of evidence undoubtedly inclines to the negative side. And, yet, why should not such cures happen? How is it that means tending to restrain growth cannot also tend to cause absorption? Consider, further, the histological resemblance of these fibroids to the hypertrophied womb. If in the one a process of involution takes place from a diminished supply of blood, why cannot a like process be brought about in the other by a like cause? But positivism is the watchword in scientific research, and the question, therefore, should not be, "What ought to be?" but "What is?" In answer to this question, I must candidly admit that theory is here not sustained by practice, and that very few typical and trustworthy cases have been reported of cures effected by internal remedies. Perhaps one reason of this is (you see how reluctant I am to yield this point), that, the treatment being a long and tedious one, the patient either gets disheartened and gives it up, or else goes from one physician to another. I have seen certainly two cases in which the fibroid slowly shrank away coincidentally with—I hardly dare to say, under—the persistent use of iron and ergot. I can also testify to the marked diminution of a very large fibroid after the long-continued friction of an ointment composed of eight grains of the biniodide of mercury to the half-ounce of lard. I was led to the use of this ointment from observing its good effects in goitres: the part anointed should be exposed to the rays of the sun until a burning sensation is felt. At the suggestion of Dr. Atlee, who has obtained success from its use, I am now trying the internal administration of the muriate of ammonia. It should be given for months thrice daily, in ten-grain doses, disguised in liquorice-powder. Simpson lauds the bromide of potassium; but very few stomachs can bear it for any length of time. McClintock reports good results from the use of the chloride of calcium. Very recently M. Guéniot has proposed the absorption of fibroid tumors by such agents as tend to produce fatty transformation of tissue. According to C. Bernard, these steatogenetic substances are arsenic, phosphorus, and lead. By stimulating the trophic nerves to greater activity, the continuous galvanic current has caused retrogressive changes in these tumors. I look upon this agent as one yet in its infancy, and as one from which much may in the future be expected.

Of course, when a fibroid is dormant you must let it alone. But, supposing the case to be an urgent one,—the hemorrhage uncontrollable—the bulk-pressure unendurable,—can these fibroids be removed or destroyed? This question brings up the important consideration of their surgical treatment proper. This I shall make brief, because no surgical method for their radical treatment has yet received the unqualified sanction of the profession. There is no doubt that, by the continuous peristalsis of the uterine fibres, both the interstitial and submucous fibroids tend to become polypi,—the one (true) by the formation of a stalk, the other (false or naked) by spontaneous enucleation. Now, if we take this hint from nature, and aim to aid her in bringing about these changes, we shall do the least harm; for the removal of either true or false fibroid polypi is recognized by all surgeons as a legitimate operation.

The simplest and safest method of effecting such an extrusion of this fibroid is to dilate the os by several incisions, and to keep up a persistent contraction of the uterine fibres by the continuous use of ergot. If, how-

ever, there should be no disposition on the part of the fibroid to become polypoid, it seems to me that you would be justified in incising its capsule with the curved and probe-pointed bistoury, as Atlee recommends, or with a straight and pointed bistoury, wrapped with lint to within half an inch of its point, as advocated by Matthews Duncan.* In the former operation the finger will be the guide; in the latter, the duck-bill speculum is first introduced, the uterus is next fixed both by suprapubic pressure and by a tenaculum in the os, and then an incision, one inch in length and half an inch in depth, is to be made into the most prominent portion of the tumor. The finger should at once be passed into the incision, in order to separate the lips of the capsule and break up its attachments. If the tumor is not very large, and within easy reach, the operation may then and there be ended by enucleation, aided, if necessary, by avulsion,—that is, by forcibly tearing the fibroid from its bed by strong volsellæ. This measure of success, however, can rarely be attained at one sitting: nor is it unattended with danger. More in accordance with nature, and less rude, does the expectant plan seem to me,—viz., after the incision, to depend for the further extrusion of the fibroid upon the expulsive property of ergot and upon repeated attempts with the finger at enucleation,—resorting to avulsion only after the lapse of weeks, or even months; and let me here remark, that as much force will often be required to tear out a naked fibroid from its bed, as in difficult forceps-labors. All operative interference with fibroids should, as a rule, be postponed to two or three weeks after the os has been incised, so as to give time for the cut surfaces to heal, and thus lessen the risk of purulent absorption. Nor should these radical operations be undertaken directly after a serious hemorrhage, but after the woman has rallied from its effects. Any oozing of blood following enucleation can be checked by swabbing out the uterus with a saturated solution of Monsel's salt. Of course, whenever the discharge becomes offensive, intra-uterine injections of disinfectants must be resorted to.

A few surgeons have succeeded in curing their patients by coring out a piece from the heart of the tumor, and plugging up the cavity with lint dipped in olive oil. The tumor then breaks down, and comes away in fragments and putrilage. The same end has been attained by the actual or potential cautery; and also by passing an electric current of high power through the growth, by means of sharply-pointed steel rods thrust deeply into its substance. There is one serious objection to these operations: the process of disintegration, being always a slow and offensive one, is attended with much risk from pyæmia.

In some cases of fibroid tumors, the uterus, together with its appendages, has been removed. But out of 35 cases, tabulated by Thomas,† 28 died from either shock, peritonitis, or hemorrhage. Yet this wholesale extirpation is an operation more successful than that of the enucleation of growths from the peritoneal surface of the womb. Hemorrhage has here been the almost invariable cause of death. The removal by gastrotomy of the pedunculated outgrowths is much less fatal; but yet so much so as to deter many ovariologists from undertaking it. Accumulating experience, however, tends towards interference in these cases, and I do not see why the same measure of success as in the removal of ovarian cysts should not be attained.

When complicated by the presence of a fibroid in the lower segment of the womb, or of a pedunculated one impacted in the retro-uterine space, labor is attended with difficulties of the most formidable character. The

* *Edinburgh Medical Journal*, vol. xii., 1867, p. 713.

† *Diseases of Women*, 3d ed., p. 507.

unaided efforts of the woman are usually unequal to driving the head past the obstruction. Rupture of the bladder or of the womb may occur, and, even after a successful delivery, a terrible flooding is liable to take place. In all cases of foreseen obstruction from this cause, if called in soon enough, your duty is clearly to induce labor at as early a period of gestation as the necessities of the case may demand. If these are not urgent, stave off this operation until viability is reached; on the other hand, keep no terms with that foetus which threatens the life of its mother. But, should labor at term have set in before you are summoned, no one plan of treatment can be laid down; the occasion will exact all your pluck and skill. If the tumor is movable, push it up out of the way, and, in order to prevent it from falling back, at once apply the forceps. If it cannot be dislodged, deliver either by the forceps or by version; by so doing you save the woman's forces and lessen her risks. If cystic, reduce the bulk of the tumor by the trocar. If within easy reach, and wholly in front of the child's head, attempts at enucleation may be made. Craniotomy will often be demanded; and, whenever the pelvic inlet is reduced to a mere chink, there will be no alternative but the Cæsarean section,—an operation, under such circumstances, almost necessarily fatal from hemorrhage. In these dreadful cases, two broad rules may, I think, be laid down for your guidance: Whenever you feel convinced that the child cannot be born alive, perforate and crush its head early, so as to diminish the chances of injury to the tumor. Whenever you are in doubt as to this, give the mother and not the child the benefit of the doubt. Should post-partum hemorrhage occur, ply your patient with large doses of ergot, and swab out her womb with Monsel's solution.

By the presence of a fibroid in the upper segment of the womb, labor may indeed be protracted, but it will not be obstructed. Yet, for reasons previously given, the woman's life will be imperilled by peritonitis, septicæmia, dangerous floodings, and uterine tenesmus. The rule here is to turn or to apply the forceps and deliver as speedily as possible, so as to save the tumor from prolonged pressure. Should your advice be sought during the early months of gestation, your duty will not be so clear. If the tumor be subperitoneal, no matter how large it may be, or if a submucous or an interstitial one not much larger than an orange, let the woman go to term. But if it be an interstitial or a submucous one of greater bulk, I should be disposed to follow the teachings of Nature, who in these cases usually abridges the term of gestation. This advice, gentlemen, is not without appeal; I give it with diffidence; and yet it is one which, I believe, you will unhesitatingly adopt whenever your patient happens to be one near and dear to you.

ORIGINAL COMMUNICATIONS.

ON SOME UNUSUAL FORMS OF INFLAMMATION OF THE CORNEA AND IRIS.

BY CHARLES S. BULL, M.D.,

Ophthalmic Surgeon to the New York Dispensary; Assistant to the Manhattan Eye and Ear Hospital.

DURING the past summer and winter I have had my attention called to some rather unusual and very obstinate forms of kerato-iritis, which occurred in quite a number of patients of all ranks and conditions of life; two of whom had applied for treatment for other affections, and were not aware that they were suffering from any disease of the eye; and these two cases impressed me very strongly with the necessity of examining the iris very carefully, as an important aid, in a

difficult diagnosis. The patients were all adults, and most of them were charity-patients who had applied at the dispensary or hospital for treatment. Some, however, were in comfortable circumstances, and two belonged to the higher classes of society.

The main characteristic of all the cases was the obstinate nature of the affection, which usually resisted all the ordinary methods of treatment. In all but two of the cases there was some constitutional taint,—either scrofulous, rheumatic, or syphilitic,—which might be looked upon as the proximate, if not as the predisposing, cause, and against which I had to contend. Another peculiarity was the tendency to exacerbation, and even to actual reappearance of the disease after apparently a complete cure. The fact of the commencement of the affection occurring in the cornea or in the iris seemed to make no difference in the prognosis or duration, except that the inflammatory action was propagated more quickly from the cornea to the iris than in the opposite direction. In no case was any other constituent of the eyeball involved in the process than the cornea and iris, although the aqueous humor was always cloudy.

When, in a case of iritis, the inflammation is isolated, confined to a portion of the iris, and the tissue is much swollen and contains deposits of new growths of a yellowish color, we may say with a good deal of certainty that syphilis is the cause. It depends somewhat upon the period in the disease at which the physician sees the case. If the iritis commences very soon after the appearance of the primary sore, it requires much longer for this specific appearance to show itself; and the later the iritis appears, the more quickly does it assume the specific form. By statistics, we know that from one-half to three-fifths of those persons who have suffered from iritis have had primary syphilis. An ordinary non-specific iritis reaches its acme rapidly, and then declines; but a specific iritis has an interrupted alternating progress, sometimes violent, sometimes light, and always lasts a long time. The non-specific variety is much more sensitive to atmospheric influences, while a patient with the specific form can easily be treated clinically. The latter, if it be of the plastic variety, is far more often accompanied by complications than the non-specific form; and the longer it lasts, the more frequent are the complications. The most frequent complication is choroiditis, next a plastic effusion into the vitreous humor, and then a detachment of the retina. Peculiar forms of retinitis also occur,—one confined to the inner layers of the retina frequently causing localized scotomata, and another form confined to the outer layers. Hence in all specific cases we should examine accurately the acuteness and field of vision. One of the rarest complications is a deposit of the same yellow nodules in the episcleral tissue. The more chronic the iritis, the greater is the certainty of the presence at the same time of opacities in the vitreous. Detachment of the retina may or may not be present. If it be, the eye will be found to have lost in intraocular tension. If the opacity of the vitreous be dense and diffuse, detachment of the retina is probably present.

According to Von Gräfe, in all forms of iritis the most frequent cause of relapse or exacerbations is the adhesion of the iris to the anterior capsule of the lens. This, I think, is wrong, for it leaves entirely out of the question any influence which may be exerted by rheumatism, syphilis, or any other constitutional taint. Still, adhesions of the iris to the capsule are a great predisposing cause; and the broader the adhesion, the greater is the danger of an exacerbation; and we have more to fear from one broad synechia than from a number of narrow ones. Complete circular adhesion of the pupillary border of the iris to the anterior capsule, of course, separates entirely the anterior from the posterior chamber; and usually, in such a case, the iris

is rendered prominent or ridge-like by the fluid in the posterior chamber. This condition sometimes leads to a detachment of the pigmentary layer from the remaining part of the iris, and may induce a secondary glaucoma. No general rule can be laid down as to what cases lead to a relapse; even when the posterior synechia is complete, cases have been observed where there has been no relapse.

In most of the cases to be mentioned, the iris was discolored and swollen, but in none of them was the pupil closed by an exudation. The cornea was generally diffusely cloudy, while in several cases there were circumscribed opacities, into which small vessels extended from the corneal border. The diffuse opacity of the cornea was not usually very dense. The forms of keratitis which, as a rule, induce iritis, are those which lead to destruction of the cornea, like the true circumscribed variety, and the torpid purulent infiltration. But in none of these cases was there any destruction of corneal tissue. Circumscribed opacities here showed no tendency to produce necrosis. The fact of an iritis and a keratitis being associated together is, of course, explained by the fact that the cornea and iris draw their supply of blood from a common source. In none of these cases was there any tendency to sclerosing of the cornea, nor to ulceration and perforation; nor is there any permanent opacity left behind. The iritis was almost always serous,—occasionally purulent, but never plastic. Two of the cases occurred in children, and were associated with Hutchinson's teeth and other symptoms of congenital syphilis.

Case I.—N. H., aged 40, married, England, miller, applied for treatment at the New York Dispensary July 6, 1871. The patient admitted having contracted primary syphilis some two months before, but said that previously he had always been a healthy man. About ten days before date he commenced to have a great deal of pain in his right eye, which was aggravated towards night, and accompanied by photophobia and profuse lachrymation. An examination revealed a serous iritis,—considerable ciliary injection, turbidity of the aqueous humor, and immobility of the pupil. The iris was very much swollen, and the anterior chamber was very deep, so that the iris seemed to be drawn backward. There was also an eruption of roseola upon his face, neck, and arms. He was treated by mercurial inunction, a drachm of the ungt. hydrargyri being rubbed upon the arm from the shoulder to the elbow every night until symptoms of pytalism appeared, when the mercury was discontinued and iodide of potassium administered, commencing with five-grain doses thrice daily, and carrying it up to toleration; each dose being accompanied by two grains of chlorate of potassa to quiet the stomach. This treatment was kept up for six weeks, when he was discharged apparently cured. In about a week, however, he came back with the same trouble, complicated by a slight haziness of the cornea. The same treatment was recommenced; but the haziness of the cornea spread, became more dense, vessels made their appearance at the limbus and ran a short distance into the cornea, and I soon had before me a diffuse keratitis resembling very much that occurring in children affected with congenital syphilis. The treatment was pushed vigorously, and in addition iron and quinia were administered, and he was ordered to take a Turkish bath once a week. The disease proved to be very obstinate, and the pain and photophobia were very distressing, so that the patient was obliged to take large doses of opium. Towards the end of the seventh week some signs of amelioration showed themselves; the cornea became less opaque, the vessels gradually disappeared, and the pain diminished; but it was not till the following November that the patient was discharged cured.

Case II.—L. M., aged 30, single, Ireland, seamstress, was admitted to the New York Dispensary July 25, 1871. The patient stated that about four months previous she had been attacked by acute rheumatism, which confined her to her bed for nearly three months; and that she had suffered more or less ever since with pains in her limbs and head. She complained of shortness of breath, and an examination showed a

double valvular murmur, most distinct at the apex of the heart. Four days previously her left eye commenced to trouble her, there being considerable pain and photophobia. An examination showed a diffuse opacity of the cornea, with some small vessels near the limbus; but the iris was not involved, the pupil responding perfectly. Atropia was instilled, and iron and quinia administered, as the patient was very much run down. No trace of any syphilitic history could be obtained. The patient attended regularly for two weeks without any change for the better or worse, when one day she presented herself with an iritis in the same eye. She said that the rheumatic pains in her joints had been very severe for several days previously, and on the previous night the pain in the eye had become almost unbearable. The ciliary injection was very marked, and the iris swollen, discolored, and bulged forward. She was placed upon mercury and iodide of potassium, with chlorate of potassa, and calisaya bark given in place of the iron and quinia. In about a week hypopion made its appearance, evidently from the cornea, which increased so rapidly that a paracentesis of the cornea was rendered necessary, and this had to be repeated twice within two weeks. After the third paracentesis the cornea showed some signs of clearing up, and gradually the vessels grew smaller and the opacity disappeared. The discoloration and swollen condition of the iris, however, lasted for some time longer; and it was only at the end of three months, dating from her first appearance, that she was discharged cured.

Case III.—M. S., aged 33, Poland, married, peddler, was admitted to the Manhattan Eye and Ear Hospital August 4, 1871. About two years previously, the patient had contracted primary syphilis, which was followed by a cutaneous eruption, sore throat, and alopecia; and more recently he has suffered severely from osteocopic pains. About one week previous to his admission, his right eye became inflamed and very painful, causing great impairment of vision. On examination, the anterior chamber was seen to be very deep, the iris discolored and swollen, the aqueous humor turbid, and marked ciliary congestion; but the cornea was not involved. Leeches were ordered to be placed on the temple, and mercurial ointment recommended to be rubbed on the arms every night. Atropia was instilled every two hours. At the end of the fifth day symptoms of pytalism appeared, and the mercury was therefore discontinued and iodide of potassium and chlorate of potassa administered. Gradually the pain increased in severity, and though the patient was taking large doses of opium at night, he could gain no sleep. August 11, paracentesis of the cornea. August 16, cornea involved in a diffuse opacity, but no vessels visible. Leeches to the temple, and paracentesis of the cornea. August 18, patient's appearance very anæmic. Pain still very great; paracentesis of cornea. From this time on, the pain grew gradually less, but the ciliary injection and opacity of the cornea remained. Iron and quinia were administered, as well as the potash. The patient remained under constant observation, and the kerato-iritis was distinguished by a number of exacerbations and remissions; but the opacity of the cornea remained after all signs of iritis had subsided, and it was not till November that the patient was discharged cured, with normal vision. On December 1 he reappeared, with a pronounced kerato-iritis of the left eye, marked ciliary injection, turbidity of the aqueous humor, diffuse opacity of the cornea, and swelling and discoloration of the iris. The patient complained of great pain, and a paracentesis of the cornea was performed. A four-grain solution of atropia was ordered to be instilled every two hours, and the patient was placed under the influence of mercury by the inunction method, followed by iodide of potassium and chlorate of potassa. The affection has proved very obstinate in this eye,—the man being still under observation. He has had five paracenteses at irregular intervals, and at present the pain is very slight and the opacity of the cornea has almost disappeared; but the iris is still inflamed and discolored, and the tension of the globe increased.

Case IV.—F. G., aged 18, United States, single, was sent to me by a medical friend for treatment for his eyes. The patient had applied to the doctor for relief from a chronic rheumatism, and was entirely unaware of any disease of the eyes. He stated that he had never been perfectly well, and when thirteen years old he was attacked by acute articular

rheumatism, which had become chronic, and recurred at irregular intervals,—sometimes confining him to his bed for weeks. The superficial cervical glands are enlarged, and at present he complains of severe headache, located in the occiput. An examination revealed the existence of a serous iritis of the left eye,—the iris being discolored and swollen, and the pupil insensible to light,—but no cloudiness of the aqueous humor, and no opacity of the cornea. The patient did not complain of pain, and there was a very moderate amount of ciliary injection. Vision was normal in both eyes. Owing to the general cachectic condition of the patient, mercury was not prescribed; but he was ordered to take a mixture of the iodide of potassium with the iodide of iron, and quinia was administered in the form of pills. Atropia was instilled every three hours. Four days later, he presented himself with a commencing opacity of the cornea, and numerous small vessels could be traced for a short distance from the limbus into the corneal tissue; and he complained of considerable pain. The cornea soon became diffusely cloudy, the ciliary injection increased, and the pain became very severe. The tension of the globe became greater, and a paracentesis was performed two weeks after his first appearance. This was in September last, and the patient remained under treatment for three months,—the corneal trouble being the last to disappear. In this case the patient seemed to gain more from the Turkish bath than from any other method of treatment.

Case V.—H. K., aged 43, England, married, roofer, applied for treatment at the New York Dispensary in September last. The patient stated that his health had generally been good, and that he had never had any trouble with his eyes until about three years ago, since which time his sight had been affected. The eyes had several times been inflamed, and he had suffered from frontal headache and *muscæ volitantes*. Shortly before he presented himself for treatment, he had caught cold in his eye; it became red, itched very much, and discharged a great deal of pus. The vision was not at first rendered any worse; but soon the pain grew intense, vision became very much affected, and he complained of a feeling of tension in the eyeball. He had used applications of hot water, tea-leaves, and bandages, but the eye grew rapidly worse. An examination revealed the following state of affairs: tension increased, intense ciliary congestion, aqueous humor turbid, and the iris swollen and discolored. He complained greatly of ciliary neuralgia and frontal headache. There were absolutely no signs of any syphilitic taint. Two leeches were applied to the temple, a four-grain solution of atropia was instilled, and a compressing bandage applied. The next day the pain was somewhat less, and he was placed upon mercurial treatment for eight days, when, symptoms of ptyalism appearing, the mercury was discontinued, and iodide of potassium was administered in fifteen-grain doses three times a day, and increased every day, until at one time he was taking sixty-five grains three times a day. On the sixth day, as the tension remained the same, a paracentesis was performed and a bandage applied. On the eighth day, signs of diffuse opacity showed themselves in the cornea, and numerous small vessels appeared running inward from the limbus. Atropia (four grains) was ordered every two hours, and iron and quinia prescribed. The cornea soon became diffusely opaque, and in a day or two pus appeared in the anterior chamber and soon increased to an alarming amount. The anterior chamber was then tapped with a broad iridectomy-knife, the pus evacuated, and a bandage applied; but the next day pus was again found in the anterior chamber. This state of things continued for three weeks, and the anterior chamber was tapped in all eight times. From this time on, the hypopion ceased, but the sluggish character of the inflammation remained, and it was finally decided to perform an iridectomy downwards. This was done, and was followed by a slow but steady improvement. The keratitis and the iritis seemed to disappear *pari passu*, and at the end of the tenth week the patient was dismissed cured,—the potash, iron, and quinia having been continued till the last.

Case VI.—J. S., aged 9, New York, applied at the New York Dispensary in October, 1871, and stated that two weeks previously his left eye had become inflamed, and that his sight was very much affected. An examination showed a diffuse keratitis, a serous iritis with moderate ciliary injection, and

cloudiness of the aqueous humor. The boy had Hutchinson's teeth very well marked, and showed other signs of congenital syphilis, such as enlarged cervical glands, and his general appearance was one of ill health. Throughout the whole course of the disease in this case there was no pain and but very little photophobia, and the tension was never increased. The patient was put upon the use of the iodide of potassium, with the iodide of iron and cod-liver oil, and atropia was instilled four times a day. He did not bear the potash well, and every few days it had to be discontinued. The disease neither advanced nor receded for about five weeks, and then showed some slight signs of improvement. The opacity of the cornea began to clear up and the ciliary injection to disappear, and at the end of the seventh week the patient was discharged cured.

Case VII.—B. L., aged 28, New York, clerk, single, was sent to my office by a friend, for an affection of the eyes of which the patient had previously been unaware. An examination showed a discoloration and swelling of the iris of the right eye, which seemed to be more pronounced in the outer half of the iris, and some slight cloudiness of the aqueous humor. The patient was markedly strumous, and was also subject to chronic rheumatism. Atropia was ordered three times a day, and iodide of potassium, with iron and quinia, administered. The eye gradually grew worse, the cornea became involved, hypopion appeared, and the pain became intense. The anterior chamber was tapped and the pus evacuated, but it slowly collected again, and at the end of a week another paracentesis was performed. Bandages seemed to aggravate the trouble, and the paracentesis had to be repeated. Towards the end of the third week, there seemed to be some change for the better. The hypopion disappeared, and the pain grew less, but the process was very sluggish; and it was not until the end of the ninth week that the patient could be discharged from treatment.

Case VIII.—A. M., aged 11, United States, was brought to me at the New York Dispensary in October, 1871. The mother stated that the child had never been well, and that her eyes had several times been affected, though never so badly as at present. The child was quite small for its age; the complexion was very sallow, the cervical glands were enlarged, and there were signs of some of them having suppurated. She also had as well-marked Hutchinson's teeth in both jaws as I have ever seen. Both corneæ were diffusely cloudy; some small vessels could be traced a short distance from the limbus, and the irides were discolored and swollen. The ciliary injection was not well marked in either eye. The child complained of scarcely any pain, and the photophobia was but slight. This condition of things had lasted for nearly a month before the child was brought to me. The child was immediately placed upon the use of the iodide of potassium with the iodide of iron and cod-liver oil, and atropia was ordered to be instilled four times a day in each eye. This treatment was continued for a month, the opacity in the cornea occasionally clearing up and again returning. At the end of this time the patient was discharged, all signs of inflammation having ceased; but in less than three weeks she returned with a relapse in both eyes, and this time the affection showed itself to be much more obstinate. The same treatment was resorted to; and, as the child did not bear the potassium well, it was given in much smaller doses. The patient is still under treatment, though it is now nearly three months since the recurrence of the attack. The cornea of the right eye is perfectly clear, and all signs of inflammation have disappeared in this eye; but in the left eye the cornea is still somewhat cloudy at the centre, and the iris is still swollen. The child's general health is very much improved.

As before remarked, the main feature in all the cases was the obstinacy shown in resisting treatment. Patience and perseverance, with careful attention to the general health, finally gained the day; and I think fully as much stress should be laid upon a general constitutional treatment as upon the local means employed. It is a general failing of ophthalmologists, I think, that they neglect too often the general health of the patient; and I would urge most strongly the necessity of general treatment.

No. 7 WEST FORTY-SIXTH STREET, N.Y.

THE RATE OF GROWTH OF THE NAILS AS A MEANS OF DIAGNOSING CERTAIN FORMS OF PARALYSIS.

BY S. WEIR MITCHELL, M.D.

I PUBLISHED last year, in the summary of the Proceedings of the Philadelphia College of Physicians, a brief communication, in which I pointed out the remarkable fact that any sudden cerebral palsy arrested the growth of the nails on the palsied side. Since then I have studied the subject with care, and have learned certain facts, which I desire to make public in advance of a paper which will treat more fully of the nutrition of paralyzed limbs.

The facts which are now known to me may be very shortly stated. The growth of nails is usually retarded more or less in all palsied limbs, whether the palsy cause be spinal, cerebral, or belonging to a nerve-trunk. As yet, owing to want of opportunity, I do not know whether or not there is any complete temporary arrest of growth in spinal or peripheral disease and injury. As regards the latter, I am disposed to believe there is not an arrest, but only more or less retarding of growth and deformation.

In cerebral palsies, whether from clot or embolus, there is an entire cessation of nail-growth on the palsied side. Usually when they begin to grow again it is a sign that the power of movement will also improve within a few days. The rate of growth slowly increases, but it generally requires four or five months for such nails to produce an entire length from matrix to free edge. To study the change, I stain the nails of both sides with nitrate of silver or nitric acid; the latter is preferable, because it soaks into and stains of a deepening yellow the whole thickness of the nail. Staining is not, however, essential except for comparison, because the line of arrested growth is marked by a deep groove, which for months may be seen as it passes down the nail, so that when accustomed to the rate of growth the place of this furrow will enable an observer to guess pretty well at the date of the attack of paralysis. The palsy need not be complete to cause this arrest. It is found in cases involving either cerebral motor palsy or sensori-motor paralysis, but as yet I do not know whether or not in the rare cases of pure sensorial palsies of cerebral origin it also exists, nor as yet have I any experience which enables me to say whether or not in sudden spinal palsies there is also complete cessation of nail-growth.

These observations have naturally led me to a close study of the nutritive changes as regards growth and repair of hair and skin in the cases alluded to, but as yet I am hardly ready to speak with confidence upon subjects such as these, which promise to open a rich field in differential diagnosis. It seems to me possible that the nail-growth may not be altered in the same degree by lesions of the cerebrum, cerebellum, pons, and corpus striatum; and I have some observations which appear to point hopefully to these facts of nail-growth, as a future means of aiding us to tell what parts of the brain have been attacked.

Very recently, one distinct and, as I believe, most valuable practical contribution to diagnosis has come out of my observations. It is briefly this:

In all sudden cerebral palsies the nails cease to grow. In hysterical palsies of one limb, or both, whether paralytic or hemiplegic, the rate of nail-growth is unaltered.

This point was first determined in a case which I saw in consultation with Drs. Koerper and Frické. In a young girl, a long series of hysterical phenomena ended in complete sensori-motor hemiplegia. The nails, being stained, were found to grow equally on both sides. In a later case, seen by my friend Dr. Packard, the hys-

terical palsy was confined to the left arm, and the nails grew alike on the two sides.

A third case was that of a young married lady, who had had many hysterical attacks. She was scared by a wild cow in the street, and, after a cataleptic fit, lost the use of her left arm. Sensation was slightly altered. The nails grew at the same rate on both sides.

Two days later, I saw a middle-aged spinster, who four years before had had a slight attack of right hemiplegia, from which she perfectly recovered. She has mitral disease, and is a most likely person to suffer from palsy. On the 10th of April, 1872, she received a letter which greatly distressed her, and, in consequence, was seized with twitching of the left lower eyelid. A few hours later she became by degrees paralyzed as to motion and sensation on the whole left side. Many of the usual manifestations of hysterical palsy were wanting, and the previous history and the cardiac conditions were such as to make probable an organic cause. I stained the nails on the second day, and, although the palsy was unaltered a week later, the nails on both sides were growing. A few days after, it was clear that the rate of growth was the same, and I therefore ventured to assert that the case was in origin purely hysterical. A very speedy and complete recovery under appropriate treatment verified my prognosis.

I trust that I have said enough to make it appear that if I am correct in my observations, they promise to afford no unimportant addition to our means of discriminating between palsies of functional and of organic origin.

VACCINATION DURING PREGNANCY.

RESULTS OF FORTY-EIGHT CASES.

BY EDWARD W. JAMESON, M.D.,

Resident Physician to Philadelphia Hospital.

THE fact that some physicians entertain the opinion that it is improper to vaccinate pregnant women on account of inducing abortion or miscarriage, leads me to give the result of that operation as practised in the obstetrical wards of the Philadelphia Hospital.

Professor Charles D. Meigs, in his work, "Woman: her Diseases and Remedies," Philadelphia, 1859, p. 597, says, "Pregnant women ought never to be vaccinated. This is a rule I advise you not to depart from even on the most urgent occasion. If a woman have been once vaccinated, and appeal to you to revaccinate her because there is a present variolous epidemic, I hope you will refuse to accede to her request. . . . I have been the witness of dreadful distress from the operation. Eschew it, I entreat you."

This language, strong and confident as it is, has not restrained the resident physicians of the Philadelphia Hospital from vaccinating pregnant women during the past six months.

On the rapid increase of smallpox in this city last fall, all patients entering the hospital were vaccinated, and since the 1st of last October more than one hundred pregnant women have been revaccinated. The operation was done in the receiving-ward with the best virus that could be obtained, selected by Mr. Bender, apothecary to the hospital.

All the crusts looked typical, and were of first-class quality. Cross-barring was the favorite method of vaccinating with most of the physicians.

All the pregnant women in the hospital October 1, 1871, were also revaccinated.

I am unable at this date to give exactly the whole number of cases, their condition at time of vaccination, etc., but can speak with positiveness from January 1 of this year. At that time I went on duty as resident

accoucheur, and, with the assistance of my colleague Dr. Harris, I was able to collect notes of forty-eight cases,—all cases of revaccination; and in some of these the operation had already been performed twice. All the women were in apparent good health, varying in age from 17 to 30 years. I made two insertions in each case, on the same arm, below the deltoid muscle. Most of the patients showed fair cicatrices of previous vaccination in infancy. More than half of the forty-eight cases were advanced beyond five months in pregnancy.

The operation proved successful in all but thirteen cases, and in no case were any unusual symptoms manifested.

Some of the women suffered considerably with their arms, particularly one German woman, advanced in pregnancy over seven months, whom I revaccinated with cowpox. Her arm was swollen from the shoulder to the wrist, and its surface covered with a diffused erysipelatous inflammation. She was delivered at full term of a fine boy. Her labor was natural in every respect. Since January 1 there have been some miscarriages, but they occurred in those in whom the vaccination proved unsuccessful.

These results may dispel the fears and anxieties of some practitioners, and prevent them from withholding from this class the only reliable preventive of smallpox. Our own experience confirms that of other observers.

Tanner, "Signs and Diseases of Pregnancy," sanctions the operation. Other prominent authors whom I have consulted—some eight or ten in number—say nothing about the subject.

Dr. Barnes, in the *British Medical Journal*, March 4, 1871, urges the importance of vaccinating pregnant women if they are at all exposed to the epidemic influence of smallpox, for these reasons:

1. Pregnant women living under epidemic or zymotic influences are more prone to take the prevalent morbid poison than others.

2. Having taken a morbid poison, they are less liable to throw it off. Their excretory organs, charged with the double duty of purifying two organisms, are liable to break down under the burden.

3. The morbid poison then pursues its course into a system which is less able to resist its injurious action. Abortion and a most dangerous form of puerperal fever are very likely to follow. Against this there is certainly a danger of producing abortion by vaccinating a pregnant woman; but this, Dr. Barnes thinks, occurs only in women in whom a miscarriage is imminent.

In the *London Lancet*, February 3, 1872, George Yarrow, a public vaccinator, speaks of having notes of twenty cases of pregnant women which he has revaccinated, and remarks that he must have vaccinated many more, and never hesitates to perform the operation. He refused to vaccinate in but one case, and she habitually aborted.

A CASE OF OPIUM-POISONING.

ARTIFICIAL RESPIRATION THE MEANS OF SAVING LIFE.

BY CHARLES E. SMITH, M.D., and H. C. HAND, M.D.,
St. Paul, Minnesota.

C. W., æt. 24, having been in trouble and drinking freely for several days, on the 4th of April, 1872, drank more freely than before. At 7 P.M. he went to his room, where his brother found him at 7.30 sleeping soundly. Becoming alarmed at 8.30 by the heavy breathing, his brother attempted to wake him, but failed, and in his attempts discovered a two-ounce vial containing half an ounce of laudanum.

Dr. D. W. Hand, Dr. C. H. Boardman, and ourselves were summoned, and arrived at about 9. At this time shaking, slapping, pricking, etc. were in no way heeded. His muscles

were perfectly relaxed, his face livid, pupils contracted, extremities blue and cool, respiration slow and noisy, pulse full and slow.

The stomach-pump was immediately used and the stomach thoroughly washed out. It was evident, from the character of contents obtained, that most of the laudanum had been absorbed.

One-forty-eighth of a grain of atropia was administered hypodermically at 9.45, and one-twenty-fifth of a grain at 10.15. By this time the respirations had become very infrequent (four to a minute), irregular, and shallow. The poles of a magneto-electric battery were applied over the phrenic nerve in the neck and around the base of the chest. The respirations were quickened and improved for five or ten minutes, and then lapsed into their former state. A noticeable point was that, when the face became very livid and the lips very blue, one deep inspiration, followed by three or four progressively more shallow ones, would occur, brightening the color, after which almost a minute would elapse with no attempt at respiration. During this time the face again became livid, and then the same process would be repeated. About 10.20 all attempts at natural respiration—which up to this time had been maintained by the stimulus of the battery—almost entirely ceased, and the pulse failed in strength. Artificial respiration was resorted to, and under its influence the color of the surface and the character of the pulse soon improved. At 11 a Hall's battery was tried, which caused respiration unaided by artificial methods for five minutes; at the end of which time it failed entirely, and artificial respiration was resumed and steadily continued until 1.30 A.M. The pulse remained from 9 o'clock to 11 o'clock quite full and strong so long as the respiration was efficiently continued, but became irregular, weak, and fluttering as soon as it was remitted even for a minute. About 1.30, however, the artificial respiration proved less effective, and a much greater effort was required to force the air from the lungs, and a greater length of time for them to fill. The pulse ran up to 120, became intermittent, and then almost imperceptible. A brisk current from the magneto-electric battery was reapplied, with the effect of at first making artificial respiration more easy, and then establishing natural respiration, which at 2 o'clock continued unaided by the battery, at ten to twelve respirations per minute. Flagellations were kept up constantly until 4 o'clock, when the patient could be made to walk a step or two, but would immediately afterwards drop down fast asleep. At 6 o'clock he was delirious, but could be roused to answer questions.

For the two succeeding days he had very considerable congestion of the lower lobes of both lungs, and later a severe bronchitis with a pleurisy of the right side.

To recapitulate, the points of interest in this case are—1. That one and a half fluidounces of laudanum were taken, the most of which was absorbed. 2. The hypodermic injection of one-sixteenth of a grain of atropia dilated the pupils widely, but had no effect whatever on the pulse, respiration, or color of the skin. 3. The magneto-electric and faradaic currents were each found more useful for being intermitted and alternated. Benefit was also noted from occasionally shifting one pole from over the position of the phrenic nerve to the spinal column. 4. By far the most important remedial measure used was ARTIFICIAL RESPIRATION. During three hours it was continuously persevered in, with the constant hope that natural respiration would come to our relief. Twice in this time an attempt at such respiration became apparent. This, favored by the use of the batteries, continued each time about five minutes, when it ceased, and the pulse became small and fluttering. For these three hours of vital importance, death was kept from assuming his dominion only by rhythmical breathing performed mechanically for the patient, not by him. At the close of the third hour, the vital forces—the heart's action especially—were failing, in spite of the artificial respiration, and it seemed almost certain that this means could preserve life but little longer. Magneto-electricity, with unexpected efficacy, now furnished the stimulus needed to strengthen the heart and

elicit those first evidences of return to life so grateful to his almost hopeless attendants. The method of respiration used was Sylvester's, with an occasional change to that recommended by Dr. Benjamin Howard.* Both methods were efficient; the change from one to the other was beneficial, because in this way the operator obtained a little rest, and because deeper respirations could be forced on making the change after the chest had become accustomed to one method.

In conclusion, we might mention another case of opium-narcotism in a young woman which was nearly as profound as this, and in which we had the satisfaction of seeing signs of life return after a steady perseverance in artificial respiration for an hour and a half. Five grains of morphia had been taken and retained three hours before she was seen. When we first saw her, there was only an occasional respiration, which soon entirely ceased. The stomach-pump could not be used, for we did not dare to intermit the artificial respiration long enough for it. No atropia and no electricity were used.

TWO OBSTETRICAL CASES.

BY DR. CEPHAS L. BARD,
San Buenaventura, California.

CASE I.—Was called January 30, 1872, to see Mrs. R. P. D., aged 32, a strong, muscular Englishwoman, the mother of two children, and who had been in labor for some hours. Found an excess of liquor amnii, which being removed, she was easily delivered of a living healthy male child, weighing ten pounds. The secundines, not passing away, were removed an hour later; and as the womb did not contract well, although there was no flooding, I made a further examination, and removed a mass which proved to be a blighted embryo or fœtus of three months' age, with a separate and distinct placenta. It was well formed, but much flattened by the pressure of the living child. Neither it nor its placenta presented signs of putrefaction.

Without citing any of the many theories in regard to second impregnation, superfœtation, etc., I will simply state that in my opinion, based upon the history of the case, the woman originally conceived twins, and that one lost its life early in gestation from an entire or partial separation of its placenta, owing to undue physical exertion on the part of the mother. The woman is remarkably robust and muscular, and whilst *enceinte* was accustomed to assist her husband in his work about the farm. She mentioned that, when about three or four months advanced in pregnancy, she "strained" herself whilst lifting barrels of water from a wagon and placing them on the ground.

Case II.—Was called, March 9, 1872, to the bedside of Doña Clemencia Hilbur, aged 30, the mother of one child, who had been in labor for four days prior to my visit.† The patient was completely worn out by her protracted labor, and there was a dribbling of a dark, viscid, and putrid liquor amnii. Examination revealed a "cross-birth," the back and shoulders presenting, and, strange to say, both arms lying in the vagina. The nature of the case was stated to the mother, and all efforts to assist her were delayed till after her confession and the application of "agua bendita" to the projecting hands of the infant and it baptized with the name of Juan, or Juana, as the sex might be. After considerable labor, I succeeded in drawing down both feet, and, traction being made to tape attached to them by one hand, whilst the other

pushed up the shoulder and arms, the child, apparently dead for several days, was easily extracted. No untoward symptoms presented themselves, and the mother is now doing well.

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE.

CLINIC OF PROF. JOS. PANCOAST.

Reported by FRANK WOODBURY.

INTRACAPSULAR FRACTURE OF THE FEMUR.—OBSCURE INJURY IN THE HIP-JOINT.

THIS patient, Captain R. V., 38 years of age, came into the clinic-room on crutches, with the characteristic one-sided elevation of the pelvis and flexure of the thigh upon the body peculiar to hip-joint affections. He stated that he had never suffered from previous disease in the joint, but was injured accidentally. He was captain of a vessel, and, during a severe storm at sea, was thrown violently across the deck, striking against the bulwarks, and seriously injured, being stunned with the shock. He was unable to use his right leg afterwards, and, thinking that he had sprained his hip, he remained for some time in his berth, giving the limb perfect rest and applying stimulating lotions. Although this accident occurred five months before, he had not regained the use of the limb, and was unable to bear his weight upon it.

As the joint was very painful on motion, Prof. Pancoast directed ether to be administered before proceeding to make the physical examination. The parts about the trochanter were slightly swollen; the limb was strongly everted, and on measurement gave a shortening of three-quarters of an inch. Considerable mobility existed about the joint. By extension, with the application of considerable force, the shortening, even at that length of time after the accident, in great measure disappeared, but immediately returned on discontinuing the counter-extension. Crepitation was obtained close up to the acetabulum.

The affection was pronounced intracapsular fracture of the neck of the femur, with the capsule pushed up on the side of the ilium, by the outer end of the broken neck. This fracture might be mistaken for a dislocation of the thigh-bone on the pubes, or into the thyroid foramen, if we looked merely to the great eversion; or on the ilium, on account of the shortening; but the lecturer showed that, by attention to all the features of the case, no mistake need occur. "In fracture with displacement the shortening may be reduced, but is immediately restored on discontinuing the traction; but if the head of the bone is out of its socket, the shortening cannot be made to disappear without reducing the dislocation. In fracture without displacement (impacted fracture), the limb will be weak and painful on movement; there will at first be no very obvious shortening, and usually but slight eversion. But the shortening will quickly follow, if the interlocking spiculæ be rudely broken in attempts at diagnosis; or after they have been softened by inflammation so as to let the fragments separate. In this form of impacted or interlocked fracture without shortening, I have known patients to limp around their bed for nearly a week, disbelieving the surgeon's diagnosis, before the complete separation and shortening took place. In fractures of this kind, treated at once on the principle of the double-inclined plane in the Charleston therapeutic chair (now quite common in this city), so that the fractured surfaces are kept perfectly at rest, I believe I have several times succeeded in obtaining a firm union. Although the limb will be strong and good after such a fracture has united, yet there will necessarily be some shortening and a little eversion."

The lecturer continued, "The strips of the fibro-serous membrane covering the neck, which I have seen bridging the fracture in cases that proved quickly fatal in consequence of other injuries, and which, I think, would be important agents in bringing about firm union, ought to be properly cared for. It is for fear of rupturing these bands, that I dislike so much to see the rough movements that so many surgeons make in order to establish their diagnosis; a prudent surgeon would be cautious in this respect.

* For a full description of which, see *Philadelphia Medical Times*, vol. ii. page 154.

† To the readers of the *Times* unacquainted with the *modus operandi* pursued by the native Californians or Mexicans in cases of confinement, I would say that a broad band, or "faja," fastened to the ceiling of the adobe, is brought down to the bed, and, after encircling the woman's abdomen several times, is passed to the hands of the midwife, or "partera," who, by forcible traction and kneading the abdomen, endeavors to assist the mother in the expulsion of the child.

"It is too late, in the case before us, to think of attempting to obtain bony union, which in this situation is always difficult, and often impracticable. The best result we can hope to obtain is such a false joint as the parts are able to make for themselves, either by the joining of the ends of the broken neck by fibro-ligamentous tissue, as sometimes happens, or, which I think more often occurs, by the flattening of the outer lip of the acetabulum, with elevation of the capsule, and the formation of a sort of head on the bone, by rounding the end of the outer fragment. To get this result without more shortening than is unavoidable, we will order him to wear an apparatus designed to give the joint as much rest as possible, without confining him in bed." The apparatus (made by Mr. Gemrig, 109 S. Eighth Street) was shown to the class. In its construction, it consisted of two flat steel rods extending along the internal and external aspects of the limb, which were connected at intervals by straps around the continuity of the lower part of the leg, giving firm support. The rod on the inside came only to the knee-joint, but the outer one passed up above the pelvis, and was attached to a broad leather belt buckled tightly around the body. A counter-extending strap, well padded, was carried from the top of the outer splint, under the perineum, and firmly fastened. Both splints were attached to the sole of the shoe; and a slide for extension, worked with ratchet and pinion, was attached to the outer one. By means of a hinge at the knee and at the ankle, moderate motion in the plane of the body was allowed to those joints; but the hip was kept extended. In this manner, moderate but permanent extension and counter-extension were maintained, and the fractured parts were kept as much as possible at rest.

In alluding to injuries of the hip, which are always obscure in their nature, the Professor remarked that, if he was not greatly mistaken, he had met with two cases of a peculiar injury at the hip-joint which had heretofore escaped the notice of surgeons, and which he would call "dislocation of the mass of fat, or Haversian gland, at the bottom of the acetabulum. This mass of fat is covered by the synovial membrane common to it and the round ligament. The ligamentum teres, as it branches to get its two attachments near the opposite ends of the notch of the acetabulum, is so clearly associated by reflexion of the synovial membrane with the Haversian mass, that we can, in a specimen previously macerated in dilute alcohol or water, readily make it force the fat from its bed, by pushing the thigh-bone into violent abduction.

"One of these cases I detailed to you when lecturing on the joint; the other is of recent occurrence. The first of these cases was that of a gentleman, who, reaching over from the curbstone to swing a heavy child suddenly from under the feet of running horses, bent his body in the effort so as to produce the effect of violent abduction at the hip-joint. The other case was that of a lady. While descending from a loft, she tripped, and, as she fell, one limb, up to the hip, became entangled between the rounds of the ladder, so that the body in falling produced a sudden and forcible abduction of the limb at the hip-joint. In both cases violent pain in the hip-joint quickly followed, increasing to such an extent that not the slightest motion of the limb, or even any agitation of the bed, could be borne. There was in neither case any shortening or lengthening, eversion or inversion. In the former case, after fruitlessly trying for several days to afford relief by antiphlogistics and anodynes, it occurred to me on examining a preparation of the hip-joint that the fat might be dislocated from its bed. With this view, I made a sudden and strong extension of the limb, combined with rotation at the hip. Sudden, almost instantaneous relief followed, and the patient was able to walk about and bear his weight on the limb the next day, with but little pain.

"In the case of the lady, after a very careful measurement and examination of the limb I was better prepared than before to anticipate the nature of the injury. Placing her under the influence of ether the second day after the accident, the leg was bent upon the thigh, the thigh flexed on the pelvis, the knee carried to the opposite side of the abdomen and then swung over the hip of the same side, just as in the manual process for reducing dislocation of the hip. Something was felt to slip, with a dull sound audible to the bystanders. In this case the relief was not so immediate and complete as in the preceding one, although much alleviation of pain was

experienced at once, and the limb could be rotated a little without much suffering. By the second day after the operation, the limb could be rotated quite freely without pain. Several weeks elapsed, however, before the patient could bear her weight upon it. This may have been partly due to a deep cut received at the same time, in the gluteal region, by striking against the edge of a stove-plate, and partly to an injury of the lumbar portion of the spine, which required free and repeated cupping for its relief.

"Cases like these must occasionally have been encountered by other surgeons; possibly they have been set down to sprain. Supposing that I have been correct in the diagnosis in these cases, it becomes a question as to what would be the probable result if they were left to themselves. It is possible that, by some subsequent movement of the limb, the fat might be forced or allowed to slide back into its bed; or it might become inflamed, and lead ultimately to some one of the chronic forms of disease which are so common about the hip-joint. In this articulation, in which the head and neck of the os femoris are so tightly embraced by the firm capsule, there is but one yielding point which could possibly accommodate a portion of the mass of fat supposed to be dislocated. This would be the notch in the acetabulum subtended by the transverse ligament, under which the two divisions of the ligamentum teres run to their insertions, covered with reflected processes of the synovial membrane which lines the free surface of the fat."

SUBCUTANEOUS INJECTION OF ERGOTIN IN VARIX.—Having observed the records (*The British Medical Journal*, April 27, 1872; from the *Berliner Klin. Wochenschr.*, March 4, 1872) of good results following the subcutaneous injection of ergotin in cases of aneurism in the hands of Von Langenbeck, Schneider, and Dutoit, Dr. Paul Vogt, of Greifswald, was led to try the remedy in varix of the lower limb. The first patient on whom the experiment was made was a man aged sixty, who had suffered for several years from extensive varices of the leg. A solution of 2 grammes of ergotin was made in 7.5 grammes each of spirit of wine and glycerine, and a quantity containing 12 centigrammes of ergotin was injected at the proximal end of a varix more than two inches long, and as thick as a little finger, lying over the tibia. The injection was repeated every second day. In eight days the varix could not be seen, and in six weeks no trace was left. During the treatment the patient went about as usual. Another varix, of the size of a hazel-nut, lying on the outer side of the calf, was treated in a similar manner, with the same result. At the point where the injection was made there was some circumscribed infiltration, which gradually disappeared. Several other patients in the Greifswald Hospital, some of them with very large varices, have been treated with the subcutaneous injection of ergotin, with a surprisingly good result. Dr. Vogt believes that the ergotin causes contraction of the muscular coat of the arteries, so that the flow of blood into the dilated vessels is hindered; that it also produces contraction in the veins; and that the local infiltration following the injection may have some effect by the compression which it exercises.

LARYNGOTOMY.—Mr. John Wood, in the course of clinical lectures on this subject (*Lancet*, March 9, 1872), says that under a sense of impending suffocation patients usually throw the head backwards; and this movement stretches the skin of the neck and tends to close the vertical incision which is usually made in the skin over the crico-thyroid membrane, and thus to interfere with free inspiration through the wound. But this frequent movement tends, on the contrary, to open a transverse cut in the tissues. He therefore prefers, with a sharp, small-bladed knife, to make a single transverse incision across the lower part of the hollow depression felt by the finger, just above the cricoid ring, through the skin and membrane at once, right into the windpipe, and to extend it sufficiently laterally to introduce a tube. Such a wound will remain open even without a tube; sometimes, indeed, the patient will breathe more easily without one. If a tube be used, it should be broader in the transverse than in the vertical diameter, and shorter in the length between the shield and the curve than the one adapted for tracheotomy.

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EDITORIAL.

THE ADDRESS OF THE PRESIDENT OF
THE AMERICAN MEDICAL ASSOCIATION.

WE have already presented our readers with an abstract of the address made by Dr. Yandell, the late President, before the American Medical Association, at its late meeting in this city. His remarks were in the main happy, and the address has generally been commended by those who heard it.

A large part of it was, like the addresses of former presidents, devoted to the consideration of the subject of medical education in the United States. Unlike his predecessors, however, Dr. Yandell seems to regard its present condition with satisfaction, and to think that the opportunities afforded to the American student for becoming familiar with the art and science of medicine are sufficiently numerous. He deprecates, apparently, any attempt to make our schools conform to a European, and especially to a German, model. Unquestionably, there may be on the part of some of our countrymen a disposition to depreciate whatever is American, simply because it is so, and it is quite possible that some of the former presidents of the Association have laid themselves open to this reproach. They may also have overlooked the fact that, in spite of the disadvantages of our system of medical education, we have physicians among us, graduates of our own schools, whose reputation is world-wide, and that a very fair proportion of medical students become in later life successful and intelligent practitioners. But it is possible to err in an opposite direction, and this part of the address will, we are sure, be regarded by many as an attempt to flatter national vanity. There are grave defects in our system of medical education; and we are sorry that the President of the American Medical Association should endeavor to underrate them, especially at a time when there is a reasonable hope that the courses of instruction at our colleges are about to undergo a marked improvement, and the efforts of the Association have hitherto been directed towards bringing this about. Why, if America affords advantages equal or similar to those of Europe, should physicians who desire to perfect themselves in all departments, or in a particular branch of medicine, find it necessary to go abroad?

In remodelling our medical schools, it is, moreover,

not necessary that they should be made the exact counterparts of those of any other country. There are, as Dr. Yandell says, many branches of science, taught in German universities, the knowledge of which does not seem to be essential to the possession of a good medical education; and these, although they may have more influence in training the mind than he perhaps suspects, may be omitted from the curriculum. It is not true, as might be inferred from the address, that clinical medicine, either in France or Germany, occupies a subordinate position to other departments of medical instruction, as it certainly does, with very few exceptions, in the schools of this country. Clinical teaching will, moreover, never hold its proper position in the estimation of students until the ability to make a diagnosis is made a prerequisite to graduation, and until professorships of clinical medicine in all its departments exist generally in our medical schools.

Dr. Yandell, while admitting the superiority of the Germans over ourselves in histology, in pathological anatomy, in organic chemistry, in microscopy, in surgery, and in midwifery, says:

"The practice of physic in Germany,—is it not little more than a meditation on death? Have not placebos taken the place of remedies in their hospitals? Standing idly by while disease is running its course, curiously marking its natural history,—looking on calmly while death and life-in-death, as described in the *Ancient Mariner*, are throwing the dice, and waiting to see whether Nature will lose or win in the struggle,—the physician seems intent mainly on tracing its ravages in the cadaver, too well satisfied to find his diagnosis confirmed by the autopsy. These vast stores of science, treasured up by the German mind through these centuries, in what have they resulted? As to therapeutics, in something hardly better than nihilism; as to physiology, in a materialism which not only abolishes religion, but renders any religious belief impossible. To this ghastly complexion, it may be, American medicine must come at last; but I am sure no philanthropist can be impatient to see the day."

A few inaccuracies may possibly have crept into the newspaper report of Dr. Yandell's address from which we make the above extract, but, if our memory serves us, the passage quoted is in the main given as it was spoken.

We appeal to any of our readers who have been recently abroad, or who are familiar with German medical literature, to say whether or not Dr. Yandell has correctly represented the condition of medicine in Germany. Is it true, then, that the practice of medicine there is little more than a meditation on death, or that nihilism represents the present condition of German therapeutics? He apparently forgets that a knowledge of the very branches in which he admits the superiority of the Germans is essential to the correct diagnosis, and, consequently, to the proper treatment, of disease; but, apart from this, we have only to refer him to the works recently issued by Niemeyer and by Oppolzer—and the influence which these men exercised during their life will hardly be denied—to convince him that there are physicians in Germany, holding prominent positions,

who attach a very positive value to drugs and other remedies. Skeptics are undoubtedly numerous among physicians there, but it should be recollected that there are many of the same class here. Moreover, he is not to be looked upon as a skeptic who, with a better knowledge of the pathology of disease and of the action of drugs, is sometimes content to let Nature take her own course, interposing only when some positive indication for treatment is presented; nor can this course, inasmuch as a fair share of success attends it, be justly stigmatized as a "meditation on death." We may remind Dr. Yandell also that much that is known concerning the therapeutic uses of electricity, now so constantly employed in the treatment of nervous disease, is derived from the Germans.

We are disposed to attach more importance than does Dr. Yandell to the preliminary education of the physician. There have been great men who have spelled badly and written inelegantly, and there have been good physicians who have done the same, but in all such cases greatness has been attained in spite of these defects in education,—not, as we are almost tempted to say, because of them. We are of opinion that it would be better if the rule which requires that the matriculant in medicine should have a college education, or its equivalent, were strictly enforced. Undoubtedly the facility with which, in this country, any one who is disposed to do so may matriculate, attend lectures, and graduate in medicine has done much to increase the number of quacks to whose pretensions the possession of a diploma gives a certain amount of color; and many a charlatan, with scarcely enough knowledge of the construction of the English language to write his own advertisements, may, even at the present day, call a respectable school of medicine his Alma Mater.

A CORRESPONDENT calls our attention to the importance of the resolutions recently adopted by the College of Physicians of Philadelphia, and subsequently by the American Medical Association. These resolutions provide that all remedies for external use should be put in bottles which are not only colored, but roughened on one side, and that in every case where a poison is sold, the bottle containing it should not only be labelled "Poison," but also have another label indicating the most efficient and convenient antidote. A case has recently occurred in his own practice which shows the necessity of the latter precaution. A woman intent upon self-destruction swallowed an ounce of bedbug-poison, containing a drachm of corrosive sublimate in solution. As the act was a voluntary one, no form of bottle could have prevented it; but, as the woman immediately afterwards confessed what she had done, her life might have been saved by the timely application of the appropriate remedies, if these had been known to her friends.

The frequency of the accidental administration of external remedies demands that every possible safeguard should be employed, and these two are of paramount importance.

CORRESPONDENCE.

THE SWALLOWING OF INSOLUBLE BODIES BY CHILDREN.

IN the *Philadelphia Medical Times* of April 15, Dr. Packard records two cases in which insoluble bodies were swallowed by children. I have recently had under my care two similar cases, differing from those reported by Dr. Packard only in the length of time the foreign bodies were retained. In one case a safety diaper-pin was passed—maliciously, there was reason to believe—into the œsophagus of a child, where it remained until, suffocation being imminent, it was pushed down into the stomach by the child's mother, who had previously attempted in vain to remove it through the mouth. The diaper-pin, which was of silver, gave rise to no irritation whatever during the whole time it remained in the digestive tract, the bowels continuing to perform their functions regularly. It was voided five months and three days after the date of the accident. In the other case, a child, whom I was treating for worms, passed a two-cent piece, which it had swallowed three weeks and three days before. In neither case was any special treatment instituted.

M. O'HARA, M.D., 31 S. 16th St.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

I REGRET to see, in your report of the discussions at the late meeting of the American Medical Association in Philadelphia, that the assertions of Dr. Palmer, of Washington, D.C., one of the rejected delegates, in regard to his having been *not* allowed to register as a permanent member,—his having been informed "late in the afternoon of the second day" that "charges had been preferred against him,"—and that he had been "denied the right to defend himself," are not followed by the denial with which I met them at the time, for the sole purpose of placing the committee of arrangements "right upon the record."

My impression was, and still is, that I gave his statements the most decided contradiction, accompanying this with the remark that they were not worth taking up the time of the meeting with any further notice.

In regard to his complaints, I have to say,—1st. That he was distinctly told *before the first meeting* that his credentials as a delegate were objected to, and would have to be referred to the Association. 2d. That he was as distinctly told *before the second meeting* that he had a right, and ought, to register as a permanent member,—which he did. 3d. That he had ample time and opportunity to defend himself, before the Association as well as before the Committee on Ethics. The only "charges" we were or are aware of as preferred, at any time, were stated in the report of that committee, and again before the meeting. His position on the platform in the exercise of the very right the loss of which he pretended to lament was ample contradiction to that part of his complaint. It did not show, however, when or how he had got in for the purpose of appeal. The answer to this is that he was urged to register before the second day, and as soon as the proper officer was made aware of his position. Everything, in short, was done to obtain and secure to him and his associates the footing and the hearing to which, in justice to all parties and under the law as understood by the committee, they seemed to be entitled.

Very respectfully,

MAY 25, 1872.

EDWARD HARTSHORNE.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Dr. J. G. STETLER, VICE-PRESIDENT, in the chair.

A T a conversational meeting held April 10, 1872, at 8 o'clock, P.M.,

Dr. BENJAMIN LEE offered the following remarks on a case of spinal caries which he presented for the inspection of the members present:

"I have brought this little lad here to-night, as a fair specimen of the results that are attainable in spinal caries by careful mechanical treatment, when the case is recognized and taken in hand in its earlier stages. I first saw him in September, 1869, in Wilmington, Delaware, in consultation with Dr. W. R. Bullock. He was then 10 years of age. His parents were both living, and I could obtain no history of strumous antecedents in the case. His own health had been tolerably good, with the exception of one or two acute inflammatory attacks. About a month before I saw him, he had, in attempting to sit down upon a trunk, missed his seat and fallen heavily, striking his back against its sharp studded edge. For the next few days he had occasional attacks of pain between the shoulders, and at the end of two weeks, after a little unusual exertion while at play out-of-doors, found himself almost unable to walk, reaching his home with difficulty. When I saw him, two weeks later, he was unable to stand erect, and supported himself by resting his hand on his knee, and in this position could walk across the room with difficulty. His sleep was much disturbed; he had lost flesh, was very pale, and had little appetite.

"There was considerable projection in the mid-dorsal region, and above that the spine bent forward very considerably. When I applied the splint, a week later, all his symptoms had become decidedly aggravated. The benefit of absolute support was immediately apparent. In a week he could stand quite erect and walk short distances with ease, and in a month was able to walk a half-mile without serious fatigue. About this time, an abscess made its appearance two inches below and to the right of the projection on the spine. This increased to the size of a hen's-egg, when it was evacuated by a free incision, and, after discharging for a few weeks, healed kindly. Four months after the application of the instrument he was seized with typhoid fever, which, although not of a severe grade, seriously diminished his vital and recuperative forces, confining him to the house for about a month. As soon as he was able to get out-of-doors again he began to improve, and in a month had entirely recovered. The instrument was worn during his sickness, with little omission. I now furnished him a spinal swing for the purpose of directly extending the spine, and of overcoming and preventing distortion of the thorax, and developing the spinal and other truncal muscles: the use of which, for half an hour daily, evidently hastened his improvement. The following summer he removed to Niagara Falls; and I was greatly apprehensive that he would, through neglect, lose all that he had gained, as there were still evidences of inflammatory, if not ulcerative, action. The use of the instrument was still continued, under the careful supervision of a surgical friend in Buffalo, and when he came to see me six months later I considered him entirely cured. The instrument was directed to be worn at least a portion of each day, as a matter of precaution.

"You will notice a decided prominence remaining on the spine, which, of course,—anhylosis having taken place,—will always be observable, although now considerably smaller than when treatment was commenced. But there is no suspicion of deformity when he is clothed, and the perfect freedom and ease of his movements suffice to prove that there is now no trace of diseased action in the vertebræ.

"The splint, you will notice, differs entirely from the braces of the shops in having no lateral crutches for the purpose of making extension. It makes use of the articulating processes of the vertebræ as a fulcrum on which to elevate their bodies, to which the disease is almost invariably confined. Its action

is therefore entirely in the antero-posterior direction, tending to unbend the curve. The principle of extension can be efficiently and safely applied in spinal affections only from a fixed point outside the person.

"Another peculiarity of this instrument is, that it has two hinges, allowing of motion posteriorly but not anteriorly, and governed by set-screws. This arrangement allows free play to the spinal muscles, and at the same time affords a means of ready and delicate adjustment without removing the instrument from the person,—both of which are matters of considerable moment."

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY, APRIL 11, 1872.

THE PRESIDENT, Dr. J. H. HUTCHINSON, in the chair.

Dr. JOSEPH G. RICHARDSON exhibited, for Dr. H. C. WOOD, a specimen of *cancer of the stomach*. He had no knowledge of the case before death, having simply made the post-mortem examination.

The specimen was referred to the Committee on Morbid Growths, who, at a subsequent meeting, reported that the specimen was one of "fibrous cancer (scirrhus)."

Dr. DE FORREST WILLARD presented, for Dr. TURNBULL, the specimens from a case of *chronic catarrh of the small intestine, with extraordinary induration and thickening of its walls, forming an abdominal tumor; intussusception at three places*.

Dr. W. said the history was incomplete. The patient was a man 23 years of age, who had been in good health until about three years before death, when he had an attack of what was termed "inflammation of the stomach." From this he never fully recovered, although able to perform light duties as a railway news-vendor until within six months previous to his death, when he was compelled to seek hospital-care in Chicago, and was there informed that he had a "tumor of the kidney." A few months later he entered the Pennsylvania Hospital, where he remained until within seven weeks of the time of his death. His symptoms were continuous severe pain in the left abdominal region, constant diarrhoea, progressive emaciation, cough, expectoration, dulness at the left apex, rigors, etc. In the left iliac region was a large uneven nodulated tumor, which was diagnosed as enlarged mesenteric glands. Death took place from exhaustion.

The patient was first seen by Dr. Willard at the autopsy, made thirty hours after death. Emaciation was marked. The skin was a pure clear white; the hands and feet were cedematous. The abdomen was flat, and there was no ocular evidence of fulness. Upon palpation, however, a mass could be distinguished occupying the left iliac, lumbar, and umbilical regions. There were about eight ounces of serum in the peritoneal cavity, with flakes of fresh lymph floating through it, and attached at many points to both its parietal and visceral layers. The *small intestine*, from the middle third of the jejunum to the lower portion of the ileum, was thickened to the extent of a quarter of an inch, and was dense, firm, and resisting. The mucous membrane was ulcerated, and at points discolored. At three separate points were distinct and perfect invaginations of the bowel to the extent of an inch; they were old, and firmly held in their false positions by strong bands. The canal, however, was pervious to a certain extent, but the entire intestine below this point was markedly diminished in size,—the colon, sigmoid flexure, and rectum being no more than one-third their normal size, yet otherwise healthy in their general appearances. Between the two invaginations was a distinct perforation from ulceration, two or three lines in diameter, through which feces could be easily pressed.

One or two of the mesenteric glands were enlarged to the size of walnuts, while the mesentery itself was thickened to the extent of an inch.

The mass of the supposed tumor was made up of the folds of thickened intestine.

The stomach, pylorus, pancreas, spleen, and kidneys were all of normal size and appearance.

The liver was healthy.

The lungs, heart, and brain were not examined.

The specimens were referred to the Committee on Morbid Growths, who at a subsequent meeting reported:

"The specimen of intussusception presented by Dr. Willard shows, in addition to that lesion, a very marked thickening of all its coats. It is brawny in consistence, and at least three or four times as thick as usual. Sections of it placed under the microscope show only a hyperplasia of its normal anatomical elements, and your committee believe that its unusual dimensions are the result of a chronic catarrhal inflammation."

Dr. JOHN ASHHURST, JR., presented, for Dr. J. N. BURNETT, a specimen of *cancer of the pyloric end of the stomach*, and read the following history furnished by Dr. Burnett:

C. M., æt. 30; periodically intertemperate; had three "discharge papers" from the U.S. service for "general debility."

Eight months ago, after a spree, he had an attack of what then appeared to be acute gastritis,—the most constant symptom being almost incessant vomiting, which, after a few weeks' rest with treatment, subsided. The attacks returned at short intervals, accompanied with pain over the stomach, vomiting after eating, and great prostration. He frequently complained of a painful floating lump in the left hypochondrium, which was never present at the doctor's visit. The bowels were usually constipated, but yielded easily to cathartics. He became much worse in November last, and has since then been confined to bed, always vomiting within an hour after eating or drinking. He emaciated rapidly, and died March 29. The pain was at no time severe, but was of a dull heavy character, such as is usual in chronic disorders of the stomach.

Post-mortem examination revealed the heart, lungs, and liver normal; the stomach large, holding three quarts. There were no evidences of congestion or inflammation; on the contrary, it was unusually white. The pyloric end was filled with a number of colloid tumors, each an inch in diameter. One of the growths had suppurated, and the pus had perforated the stomach and a small quantity escaped into the abdominal cavity. The transverse colon was adherent to its surroundings by organizations of long standing.

The specimen was referred to the Committee on Morbid Growths, who later reported it to be *medullary cancer*.

Dr. JAMES TYSON presented specimens of *syphilitic gumma of the liver and albuminoid (sago) spleen*, removed from a woman who had long suffered with chronic diarrhoea in the Philadelphia Hospital. The gummata presented their usual opaque, white, hard characters, merging at their periphery into the fibrous texture of the organ, so as to be quite incapable of enucleation.

The albuminoid spleen was a beautiful example of the so-called sago spleen, the degenerations being confined to the Malpighian corpuscles. The iodine reaction was markedly distinct with a solution composed of one part tincture of iodine, one part alcohol, and two parts water,—a proportion which, he had found, furnishes the most satisfactory strength for the test-solution. The blood-vessels of the small and large Lowel exhibited the same reaction.

Dr. TYSON also presented, for Dr. WM. PEPPER, a marked example of *stenosis and insufficiency of the mitral valve*. The case had been attended before death by the so-called pre-systolic or auricular systolic murmur.

Dr. J. E. MEARS exhibited a specimen of *mural fibroid tumor of the uterus*, removed *post mortem*.

Dr. M. remarked that he had examined the patient during life, in consultation with Dr. A. C. Deakyne, of this city. She was 37 years of age, and had been married three months. The growth of the tumor was extremely slow, an enlargement being first observed seventeen years ago. During the development of the tumor she had suffered from numerous attacks of uterine hemorrhage, some of them quite severe. By palpation and percussion over the abdominal surface, a solid tumor, pyriform in shape, could be distinctly outlined occupying the lower central portion of the abdomen, extending above to the umbilicus. A vaginal examination discovered the os uteri behind the symphysis pubis, high up in the pelvis. The sound entered the cavity of the uterus to the extent of four and a half inches, and its point could be readily felt through the abdominal walls. The posterior wall of the uterus was occupied by a fibroid mass, with a small pedunculated growth attached, about the junction of the neck and body of the

organ. The examination was limited to the abdominal and pelvic cavities, and the diagnosis was a mural fibroid tumor of the uterus occupying the posterior wall, which the autopsy proved to be correct. The immediate cause of death was found to be cardiac disease, both the mitral and the aortic valves being implicated. Had the patient lived, Dr. Mears proposed to remove the tumor, and with it the uterus, by the method of enucleation,—the plan recommended and pursued by Dr. W. L. Atlee in cases of this character. He showed, on the specimen, how readily this could be effected, by boldly incising the peritoneal and fibrous tunic of the organ, and enucleating it *en masse* with the handle of the scalpel. By this method the appendages of the uterus are not disturbed, beyond separation of the Fallopian tubes and ovarian and round ligaments at their points of attachment to the superior angles and sides of the organ. The uterus is to be divided at the junction of the neck and the body, if the tumor does not extend below this point. The envelope of the tumor is folded so as to form the pedicle, and is embraced by the clamp and treated outside of the abdominal cavity as in cases of ovarian tumors.

Dr. JOHN ASHHURST, JR., asked Dr. Mears whether he had had any experience in the "enucleation" of ovarian tumors.

Dr. MEARS replied that he had not. He thought it a difficult operation, particularly in certain cases. In cases of adhesion of the intestines, in which Dr. Atlee usually dissects off the peritoneum, there is frequently great trouble from hemorrhage. In one such case the fatal result was due to the fact that, the pedicle being broad and short, a small portion left in the abdominal cavity suppurated. Had the operation of enucleation been performed in the case from which the specimen was exhibited, the surfaces of the peritoneum would have been so apposed as to cause discharges to pass out by the vagina.

REVIEWS AND BOOK NOTICES.

LARYNGOLOGISCHE BEITRÄGE. Bericht über die Abtheilung für Kehlkopfkrankheiten im St. Rochus Spital zu Pest. Von Dr. Emerich Navratil, Docent an der Königl. Ungar. Universität, etc. 8vo. Leipzig, 1871.

(LARYNGOLOGICAL CONTRIBUTIONS. Report of the Division for Throat Diseases in St. Rochus Hospital of Pesth. By Dr. Emerich Navratil.)

Czermak, by whose genius and perseverance the laryngoscope was first brought to perfection, was a native of Pesth, and it was there that he achieved his famous triumphs in illuminating the laryngeal cavity. It seems eminently appropriate that the Hungarian authorities should thus attest their appreciation of these valuable discoveries, by setting aside wards in their principal hospital for the exclusive accommodation of throat patients, and thus fostering the specialty so auspiciously inaugurated.

The book before us is a summary of the work done during a period of a little over two years. Nearly a thousand in-door and out-door patients were treated. Although this production does not claim to be much more than a mere summary of these cases, yet its attractive garb of illustrations and admirable chromo-lithographic plates, and the evident fairness of its statements, at once free the book from the opprobrium of mere dry statistics, and are bound to secure for it a high rank among laryngoscopic authorities.

A series of interesting tables is given, showing the different ages, occupations, nationalities, and the average number of the various affections. From the latter we ascertain that the greatest number furnished by any one disease is that of tubercular ulceration of the processus vocalis; next comes that of acute laryngeal catarrh; then that of chondritis vocalis. Laryngeal catarrh, in nearly one-half of the cases, was not confined to the larynx, but extended to the contiguous parts; when limited to the mucous membrane between the arytenoids,—meso-arytenoiditis,—it is generally associated with some constitutional affection (syphilitic, tubercular, or scrofulous); on the other hand, catarrh of the vocal cords,—chorditis vocalis—in most cases denotes but a purely local evil.

The treatment adopted in simple laryngitis consists in the application of astringents, such as alum, tannin, and sulphate of zinc, either in the powdered form by insufflation, or in solution by means of the atomizer. The former method is particularly recommended in the simple and strictly localized forms; morphia can in such cases often be advantageously combined with the astringents. In abundant tracheal or bronchial secretion a solution of sulphate of zinc proved most satisfactory.

Of two hundred and forty-six cases of laryngeal ulcers, but nine proved to be a purely local evil, so that by far the greater number of ulcers met with are almost certain to be seated upon a constitutionally affected basis. It is often difficult to determine the nature of an ulcer by means of the laryngoscopic examinations alone; this may be rendered impossible by the greatly infiltrated edges, by the complicating œdema of the neighboring parts, and the lack of determinate marks for the character of the ulcer. But generally "the syphilitic ulcer is usually distinguished from the tubercular by the absence of œdema, by the narrow margins of the ulcer, and by the bright-red color, which may be regarded as characteristic in contrast to the pale-red or anæmic appearance of the latter class of ulcers." The typical tubercular ulcer is described as "having an irregular form with notched and undermined edges, the parenchyma of the mucous membrane blanched, with either a smooth or a granulating base." Navratil claims to have seen the actual tubercle associated with laryngeal ulcers. For these the term "ulcera tuberculosa" is proposed, in contradistinction to those resulting from mere follicular diseases, so often found associated with cheesy pneumonia; such are termed "ulcera caseosa." No diagnostic features, however, are mentioned with which such a fine distinction might be made during life. Necrosis of the processus vocalis and ankylosis of the crico-arytenoid articulation are mentioned as not very unfrequent results of the laryngeal ulcer.

A plate is furnished representing the "laryngeal dilator," as invented by Navratil for the purpose of rapidly dilating any laryngeal or tracheal stenosis. The instrument is constructed upon the plan of the ordinary laryngeal pincette, excepting that its blades open laterally by means of an ingeniously contrived lever apparatus. It promises fair to prove a valuable acquisition to surgical appliances.

The chapter upon paralysis of the vocal cords contains many new and interesting observations. No benefit, except in the subacute cases of paralysis, was derived from the use of faradization, the effect of which remained the same whether externally or internally applied. More satisfactory results were obtained from the use of the constant electric current.

Among this number of patients there were found twelve cases of new growths within the larynx. Their histories and the details of the different operative procedures are given *in extenso*. Their removal was effected by the use of various instruments, the laryngeal forceps, *écraseur*, and galvanocautery being the ones most frequently employed.

Laryngo-fissure was performed in two cases of mucous polyps. Although considerable *éclat* is usually attendant upon the successful performance of such a dangerous operation,—now never thought of except as a *dernier ressort*,—yet we are inclined to question whether Navratil will gain much credit in not having contented himself with simple tracheotomy for the relief of the more urgent symptoms, and subsequent removal of the tumors *per vias naturales*.

THE PHYSIOLOGICAL AND THERAPEUTICAL ACTION OF THE BROMIDE OF POTASSIUM AND BROMIDE OF AMMONIUM. By EDWARD H. CLARKE, M.D., and ROBERT AMORY, M.D. In two Parts. 8vo, pp. 178. Boston, James Campbell, 1872.

Not very many years ago, books treating upon the action of drugs, after the manner of Drs. Clarke and Amory, were few in number and, as we read them now, of little value. Modern Medicine requires more of her workers than shrewd guesses. Given a pure drug, the physiologist experiments with it upon man and animals, carefully noting its absorption, its elimination, its action while in the economy, and deduces certain conclusions, which he places in the hands of the therapist, who, not forgetting the changes produced by a pathological condition, is guided by them in the treatment of disease.

Judged by this standard, we pronounce the book before us to be a model. In Part I., Dr. Amory has laid down propositions, tested them by a series of carefully conducted experiments, in which he was aided by the thoughtful and attentive assistance of the medical classes of Harvard University for the years 1868–69, and, finally, has recorded his conclusions. We copy these, as follows:

"I. Bromide of potassium is easily absorbed by the mucous membrane, etc.

"II. This drug is *easily* absorbed by the skin, provided the water in which it is dissolved is below the temperature of 75° F. If the temperature is above 96° F., it is not absorbed.

"III. The elimination is conducted by the skin and kidneys; as the saliva is a secretion, its presence in this fluid is not a proof of its elimination.

"IV. In therapeutical doses, bromide of potassium is not eliminated by the intestines or lungs.

"V. Bromide of potassium passes out of the system without decomposition, etc.

"VI. The effects of the drug are produced by its direct action upon the blood-vessels or the vaso-motor system which controls the contraction of these vessels, which explanation may account for all the physiological or therapeutical conditions brought about by the exhibition of this drug.

"VII. There is probably no different or opposing action in proportion to the dose administered. The larger the dose (not exceeding forty grains), the more intense and the longer the action upon the vaso-motor system.

"VIII. Its action upon the general nervous system is secondary, and dependent upon that of the vaso-motor nerves, etc.

"IX. Bromide of ammonium, in *almost* every respect, has the same action as bromide of potassium. This I infer from the results of more than twenty experiments."

In Part I., Dr. Clarke supplements the investigations of Dr. Amory by an account of the therapeutical uses and value of the bromide of potassium and kindred salts. The record of the former is exceedingly good, but that of the bromide of ammonium is not so complete; and we refer the doctor to the Pennsylvania Hospital Reports, vol. ii., 1869, for a paper entitled "A Contribution to the Therapeutics of Acute Rheumatism, based on a Series of Cases treated with Bromide of Ammonium, by J. M. Da Costa, M.D." A brief account is given of the bromides of lithium and sodium; but Dr. Clarke does not hold that any of the bromides equal in value the bromide of potassium. A field is yet open to the investigator. Still, as these papers were not intended to be exhaustive, we thank Drs. Clarke and Amory for their contribution, and express a hope that the supply of such books may, like Tennyson's brook, "go on forever." One word, too, for the publisher. Were it not for the imprint, we should insist that the volume had crossed the Atlantic instead of coming to us from Boston,—so English are the type and the general appearance.

WORMS. A Series of Lectures on Practical Helminthology, delivered at the Medical College of the Middlesex Hospital. With Cases illustrating the Symptoms, Diagnosis, and Treatment of Internal Parasitic Diseases. By T. Spencer Cobbold, M.D., F.R.S., Honorary Correspondent of the Academy of Natural Sciences of Philadelphia. 12mo, pp. 178. Philadelphia, Lindsay & Blakiston, 1872.

These lectures do not, as the author admits in the preface, cover the whole ground of practical helminthology: they are devoted to the consideration simply of those forms of internal parasitism which ordinarily come under the notice of the physician, and will be found to contain much useful information in a small compass. Several of them have already been published in the *Medical Times and Gazette*, but the greater number are entirely new, and have been only very recently delivered.

As most important to practical physicians, we will give a résumé of the treatment recommended by this distinguished helminthologist for the cure of parasitic disorders, and this we shall endeavor to do as briefly as possible. The remedy which he has prescribed most frequently for tapeworm is the male fern, which he prefers to give in the form of the ethereal extract, the powder having occasionally proved inert in his hands. Other drugs may sometimes be resorted to with

advantage, and these are oil of turpentine, kousso, areca nut, kameela, and chloroform. In cases where there is reason to suspect the existence of the *ascaris lumbricoides*, he has found santonin the best anthelmintic,—a statement which physicians who have had much experience in its use will confirm. The natural saline waters, especially those which possess a slightly bitter taste, are recommended for patients infected with the *oxyuris vermicularis*, or common threadworm, which Dr. Cobbold is disposed to think is more frequently an inhabitant of the cæcum than of the rectum or lower bowel, although the contrary is asserted to be the fact by most writers on parasitic disease. "Though," he says, in deference to the statements of practitioners abroad, "I have often employed santonin, podophyllin, and chenopodium,—the latter both in oil and powder,—I am bound to say that any good results following their use generally appeared to be principally attributable to the aperients employed to increase their action." In the treatment of the so-called endemic hæmaturia from Bilharzia, he advises the employment of such drugs as are known to exert a special soothing action on the mucous membranes, and with this end in view he has frequently prescribed buchu. He thinks it absurd to attempt to destroy the parasite by the administration of parasiticides, which may even do harm by weakening the patient and thus interfering with nature's curative efforts.

CIRCULAR NO. 3—SURGEON-GENERAL'S OFFICE. A Report of Surgical Cases treated in the Army of the United States from 1865 to 1871. Edited by George A. Otis, Assistant-Surgeon U.S.A. Quarto, pp. 296.

This handsome quarto contains accounts of 1037 cases in surgery, of which over 700 cases are reported in detail, and many elaborately. A collection of this kind from men of more than average culture, when edited with the known ability of Dr. Otis, is at once recognized as an important contribution to our medical literature. Designed professedly for the "information and instruction of medical officers," it cannot be ignored by the profession at large.

Perhaps the great bulk of the circular is devoted to the consideration of wounds, both gunshot and arrow. Of the former, 3239 cases are recorded. Concerning the careless handling of dangerous weapons, we have only too frequent evidence in civil life; nor among soldiers, who are supposed to be trained to unusual caution, is the liability to "accidental death" from this cause lessened. One soldier, as seen by the report before us, discharges his musket in a barrack, and kills a sleeping comrade. Another sends the contents of his rifle through the side of the guard-house, mortally wounding a prisoner therein confined. A third hopelessly shatters the femur of a fellow-soldier by the "accidental discharge" of his musket. The Indian, it would appear, is not the only agent that may diminish the life-rate of enlisted men. We wish that the charge of accident would explain all the casualties. "Of fourteen instances of gunshot-wound of the heart," Dr. Otis remarks, "one was inflicted by an Indian, two by sentinels, one accidentally, two suicidally, and the eight other cases were murders." This quiet observation gives us a glimpse of the lawlessness of certain parts of the frontier better than an elaborate comment could have done. We have been struck with the frequent occurrence of such phrases as the following, used in narrating the surgical incident: "wounded at a fandango," "wounded in a drunken row," "shot in a street-fight with a policeman," etc.

The facility with which gunshot-wounds may be inflicted in the line of duty, upon enlisted men, by guards and officers, aids in swelling the list of wounded in times of peace beyond a point which, at first sight, would appear probable.

After the above remarks, we may expect to find many wounds received at short range. Such proves to be the case; and much of the professional interest thereunto pertaining is derived from that fact. Dr. Otis informs us that, of the sixteen cases of gunshot-wound of the neck, ten proved fatal,—an exceedingly large proportion. In twenty cases, the carotid, subclavian, external iliac, and femoral arteries were divided. "A musket- or pistol-ball moving with great velocity will cut or divide an artery which, at a greater distance, would only be contused, or, by its resiliency, escape injury altogether."

The chapter on arrow-wounds is perhaps the most novel in the volume. Thirty-seven cases are given, in detail. The

editor, in view of arrow-wounds receiving but little attention at the hands of authors in general surgery, treats us to a learned essay on the subject,—which, together with Assistant-Surgeon Bill's well-known essay (published in the *American Journal of the Medical Sciences*), is so complete that no one desiring to contribute to this department of surgery could well do without consulting it. Dr. Otis—from the evidence of the specimens in the Army Medical Museum—would differ from Dr. Bill as to the effect of a perforating arrow-wound upon the skull. Instead of exhibiting a multiple stellation (splintering and depressing) of the inner plate, "they show both tables of the calvaria punctured, with little or no fissuring, externally or internally."

The initial velocity of the missile is greater than has been generally supposed. It is estimated that it nearly equals that of a musket-ball. At a short distance, an arrow may perforate the larger bones without comminuting them, or cause a slight fissure only. It is not infrequent for an Indian to send an arrow fairly through the body of a horse or a buffalo, provided the missile enters one of the intercostal spaces and does not impinge on bone on the opposite side.

In inviting attention to the splendid collection of cases in this circular, we cannot but remark the conscientious care that has been taken in working up their detail. Minute description of the direction and course of a ball, an intelligent abridgment of the history of chronic cases, with careful post-mortem dissections, are the rule. We doubt very much whether the same number of cases would have been recorded in civil practice so well.

Among so much good work, it is difficult to particularize. Among the novelties in treatment may be mentioned Dr. McGill's essay on Periosteal Flaps; ice poultices as employed by Assistant-Surgeon W. H. Doughty; and the use of upholsterers' needles to shape a dressing for fractured tibia, as suggested by Assistant-Surgeon Fitzgerald.

Some of the more noteworthy cases have appeared in our periodicals, as well as in preceding circulars of the Surgeon-General's office. We may mention in this connection Otis' successful re-amputation at the hip-joint, and Gibson's successful excision at the hip. Of both of these cases full-page lithographs are given.

Sixty-nine figures accompany the text. We fear that the one with the inscription "testis enlarged and indurated by inflammation" could not be easily identified were the label of the block mislaid.

BOOKS AND PAMPHLETS RECEIVED.

A Treatise on the Diseases of Infancy and Childhood. Second Edition, Enlarged and thoroughly Revised. By J. Lewis Smith, M.D., Clinical Lecturer on Diseases of Children, and Professor in Bellevue Hospital Medical College, New York, etc. 8vo, pp. 741. Philadelphia, Henry C. Lea, 1872.

Clinical Lectures on the Diseases of Women. Vol. III. By Sir James Y. Simpson, Bart., M.D., D.C.L., etc. Edited by Alexander R. Simpson, M.D., etc. 8vo, pp. xxiii., 789. New York, D. Appleton & Co., 1872.

A Treatise on Diseases of the Bones. By Thomas M. Markoe, M.D., Professor of Surgery in the College of Physicians and Surgeons, New York, etc. 8vo, pp. 416. New York, D. Appleton & Co., 1872.

Catalogue of the Library of the Surgeon-General's Office, United States Army, with an Alphabetical Index of Subjects. Washington, Government Printing-Office, 1872.

Historical and Biographical Memoirs, Essays, Addresses, etc., written at Various Times during the Last Fifty Years, and now first published in their Collected Form. By George B. Wood, M.D., LL.D., Emeritus Professor of the Practice of Medicine in the University of Pennsylvania. 8vo, pp. 576. Philadelphia, J. B. Lippincott & Co., 1872.

Eighteenth Report upon the Registration of Births, Marriages, and Deaths in the State of Rhode Island. By Edward T. Caswell, M.D.

Forty-Sixth Annual Report of the Surgeons of the Massachusetts Charitable Eye and Ear Infirmary.

The Ethics of the Medical Profession. Read before the Sacramento Society for Medical Improvement. By Joseph F. Montgomery, M.D.

Proceedings of the Homœopathic Medical Society of Ohio, 1871.

Transactions of the Twenty-First Anniversary Meeting of the Illinois State Medical Society, held at Peoria, May 16, 1871.

Second Annual Announcement of the St. Paul's School for Medical Instruction.

GLEANINGS FROM OUR EXCHANGES.

THE HISTOLOGY OF CROUP.—Dr. F. Steudener, in the course of an article on this subject in *Virchow's Archives*, April 11, 1872, says that after death from croup the mucous membrane of the larynx and trachea will generally be found free from membrane, and covered only by a tenacious, purulent mucus. It is sometimes found to be in a condition of extreme hyperæmia, but just as frequently, and even in cases in which the symptoms have been severe during life, it has an anæmic appearance. It is generally deprived of its epithelium. Small patches of epithelium are, however, observed, especially about the mouths of the racemose glands. The membrane itself will be discovered to be infiltrated with round, finely granular cells, which are most numerous immediately beneath the surface, and least numerous in the vicinity of the elastic fibres. In certain portions, the compression exerted by them is sufficient to diminish the supply of blood. From the same cause, obstruction and consequent dilatation of the ducts are produced. A similar infiltration is noticed in the submucous tissue, especially in the parts immediately surrounding the racemose glands, and it has even been found to extend in some cases to the loose connective tissue on the outside of the cartilages.

The examination of the false membrane shows that it consists largely of round, transparent cells, corresponding in form and size with those found within the mucous membrane. When treated with acetic acid, these cells are seen to contain a nucleus, and sometimes a nucleolus, and to be imbedded in a homogeneous or finely-granular substance. In some cases the cells are separated by a fine network of fibre, similar to the network of connective tissue which forms the frame-work of the lymphatic glands. Besides the cells above alluded to, epithelial cells are occasionally entangled in the false membrane.

In regard to the origin of the false membrane, Dr. Steudener believes that the epithelium of the larynx and trachea has no part in its formation, holding that it would be impossible for so dense a membrane to be formed by the delicate cylinder epithelia of these parts. We must also remember that the membrane is often renewed after the destruction of the epithelium. He says that invagination of pus-cells in epithelial cells has often been mistaken for endogenous growth. He adds, "We must therefore look upon the membrane of croup as really an exudation, caused by the migration (*auswanderung*) of white blood-corpuscles from the vessels into the mucous membrane, and thence to the surface, where, without the participation of the epithelium,—which is in great part thrown off,—the membrane is formed by the coagulation of a fibrinous exudation which accompanies the migration of the white blood-corpuscles."

LOSTORFER'S CORPUSCLES.—Dr. James R. Chadwick, in a letter to the *Boston Medical and Surgical Journal* for May 25, says that Professor Stricker has modified his opinions in reference to these bodies, in consequence of finding them in great quantity in a series of preparations from tuberculous and carcinomatous patients. They were also detected in the blood of persons with the following diseases: heart-disease, Bright's disease, anæmia, and lupus. The development of the corpuscles does not depend, therefore, upon the presence of syphilitic virus, but only upon a condition of the blood resulting from serious constitutional affections. Although they

can no longer be offered as pathognomonic indications of syphilis, their presence in the blood may have some weight in guiding us to a diagnosis in questionable cases of exanthemata, periostitis, and the like, *i.e.* between purely local lesions and similar manifestations of a constitutional malady, since they have been always found in secondary syphilis, even in cases where the patients have been apparently in good health.

THE CAUSATION OF THE CHOKED DISK IN INTRACRANIAL DISEASE.—Dr. T. Clifford Allbutt (*The British Medical Journal*, April 27, 1872), after alluding to the importance of ophthalmoscopic examination in diseases of the nervous system, proceeds to discuss the causation and significance of the choked disk, or "stauungs-papilla," in intracranial disease. He says the evidence in favor of its production by excessive intracranial pressure is too strong to be lightly set aside, but he nevertheless rejects Von Gräfe's explanation, that the pressure resolves itself towards the base of the brain, and that it there exercises more or less compression upon the cavernous sinus, and hinders the ebb of the venous blood coming from the eye. He offers the following explanation of the causation of this pressure upon the disk. Schwalbe, Schmidt, and others have recently demonstrated that there exists a lymph-cavity between the outer and the inner sheath of the optic nerve, which lymph-cavity is continuous with the arachnoid cavity. This lymph-channel is now called the subvagal cavity; and Schwalbe's experiments prove that liquids under pressure readily find their way into it from the arachnoid cavity. Thus a pressure of accumulated fluid is liable to be set up around the optic nerve-entrance, where there is a limit to its further progress. The venous distention which is often observed at the same time is said by Dr. Allbutt not to be the cause of the swelling of the disk, but the consequence,—to be not a primary, but a secondary event.

CANCER OF THE TONSILS.—Mr. Alfred Poland, in the course of a paper in the April number of *The British and Foreign Medico-Chirurgical Review*, after alluding to the great rarity of cancer of the tonsils, and to its inevitably fatal termination, says that it may be either primary or secondary, or of the medullary or scirrhus form. In regard to the diagnosis of the disease, he adds that "in the early stage of both forms of the disease there is no distinguishing mark to guide us as to the nature of the disease. Enlargement of the tonsil is the only sign, and this does not arrest the attention of the patient, nor excite any suspicion in the mind of the surgeon, in consequence of the very frequent occurrence of subacute and chronic inflammation of the glands in a very great majority of persons. As the disease advances, the peculiar nature of the fatal disease begins to develop itself. When rapid, it steadily encroaches upon the fauces and pharynx, involves the lymphatic gland at the angle of the jaw, and afterwards the cervical glands, and soon destroys the patient. The scirrhus variety, on the contrary, may often fail to be recognized; but its slow progress, and its becoming ulcerated and excavated on its surfaces, render it less liable to be confounded with chronic hypertrophy and syphilitic ulceration. However, both these diseases have passed for cancer; and on the other hand, cancer has been presumed when subsequent results have disproved the supposition. Excessive hardness, implication of the lymphatic glands, peculiar ulceration, fetid discharges, increasing growth, and peculiar cachexia, seem to be its characteristics.

In speaking of the treatment, Mr. Poland says that, whenever there is any reason to believe that there is a syphilitic taint, iodide of potassium should be given, and in any case it might be well to give the patient the benefit of the doubt. He refers approvingly to Dr. Cheever's operation in extirpating an encephaloid tonsil and an enlarged gland at the angle of the jaw, by an external incision in the neck. This operation appears to have been performed, however, by Langenbeck in 1865, and by Hueter in the same year. Caustics, and escharotics generally, only aggravate the pain, and are not recommended. The removal by the amygdalotome is generally out of the question. The *écraseur* may, however, be used, when the tumor has not attained a large size, and when the loop of the instrument can readily embrace the whole base of the tumor. But danger is attached to this operation

at all times, as the loop may include some of the important vital structures in the neighborhood. The tumor was in one case removed by means of a wire ligature which was thrown around it, and in others by incisions from within the mouth.

SPINA BIFIDA CURED BY REPEATED TAPPING AND PRESSURE.—At the meeting of the Lisbon Society of Medical Sciences on February 17 (*British Medical Journal*, March 23, 1872; from *O Correio Medico da Lisboa*, March 1, 1872), Dr. Camara Cabal communicated a case of congenital spina bifida which he had successfully treated. The patient was a child, aged twenty-five days, which was brought into the St. Joseph Hospital on November 21. It had in the lumbo-sacral region a swelling of forty centimetres in circumference, seventeen in vertical and ten in transverse diameter, and six in depth. It fluctuated, was transparent like a hydrocele, and appeared to contain not only fluid, but some solid body. Pressure on it did not produce convulsions, nor was there any paralysis or other symptom denoting a lesion of the spinal cord. It was therefore concluded that the tumor consisted exclusively of a hernia of the meninges, filled with fluid. On the 29th it was tapped with a Dieulafoy's trocar, and four hundred grammes of a transparent yellow fluid, containing an abundance of albumen, were removed. Compression was applied by means of adhesive plaster. No symptoms followed the operation, beyond some vomiting and loss of appetite. Some days later, the tumor having again enlarged, two hundred and fifty grammes of liquid were removed; and on December 14, four hundred and twenty-five grammes. On a fourth and a fifth occasion, puncture was performed at intervals of some days,—the quantities evacuated being respectively one hundred and seventy-five and one hundred and twenty-five grammes, and the fluid being more highly albuminous than before. After the last two operations, there was some meningitis, which yielded to ordinary remedies. The child made a good recovery, and was exhibited at the meeting at which the case was described.

SEA-SICKNESS, AND SOME OF THE MEANS OF RELIEVING IT.—Sir James Alderson, M.D. (*British Medical Journal*, March 9, 1872), in the course of some remarks on this subject, after alluding to Wollaston's explanation of sea-sickness, says, "The approximately rigid brain and vessels are carried downward, the blood remains by its own inertia, and the consequence is to crowd blood into the vessels of the brain, and so press with increased force, producing a certain shock. This shock and the attendant pressure produce sickness and vomiting. The vomiting thus induced is of a peculiar character,—very different from that proceeding from a common disordered stomach. It occurs in a spasmodic manner, and violent retching remains after the contents of the stomach have been ejected. The continuous retching seems to indicate the repeated action of the increased pressure." Referring to the experience of sufferers from sea-sickness, he says it is admitted by all that they are most sensible of the miserable feeling at the moment of the descent of the ship.

In regard to the means of averting sea-sickness, Dr. Alderson says the first point is wholly to avoid the upright posture. But it is necessary not only to take the recumbent position, but to lie in the right direction. The sufferer should lie down with his head towards the bows, when he will be, during the descent of the ship, in a position in which there is a tendency to reduce the natural supply of blood to the brain. On the other hand, if he reverses his position, then the blood will have a tendency to move from the feet to the head.

THE ORIGIN OF PUS.—Drs. Hoffmann and Langerhans have found (*Virchow's Archives*, April 11, 1872) that cinnabar, when injected into the blood-vessels, will be deposited in the cells of the connective tissue. Under ordinary circumstances, the amount deposited is so small that it might readily escape detection, but an accumulation of the cinnabar may be produced by exciting inflammation in a part. While, however, cinnabar exists under these circumstances in large amount in the cells of the connective tissue, the pus furnished by the part will be found to be entirely free from it. They are, therefore, inclined to the belief that the connective-tissue cells do not play an active part in the formation of pus, and agree with Cohnheim in thinking that up to the present time it has not been satisfactorily demonstrated that the pus-cells have any other source than the blood-vessels.

THE TREATMENT OF HEPATIC DROPSY.—Dr. W. R. Basham, in the course of an article having the above title (*The Practitioner* for April), says "there are cases, which experience will without difficulty discriminate, in which great advantage is derived from a small bleeding from the arm. Six or eight ounces at most may be taken, with speedy relief to the pulmonary distress, and a consequent subsidence of the venous tension and a diminution of the excessive anasarcaous effusion. The indications by which the venesection may be justified are found in the aspect of the patient and the state of the pulse. The features are dusky, the eyes are hazy, the lips have a venous color, the respirations are short and husky; moist wheezy murmurs are heard everywhere in the chest; the pulse is sometimes irregular, with some degree of fullness. In some cases it is small and sharp, while the heart's sounds are altered or modified by the presence or absence of atheromatous disease of the aorta, which is a frequent complication in these cases. . . . In the disease now under consideration, not only is there obstruction to the circulation through the liver by the morbid changes which its parenchyma have undergone,—an obstruction which is the parent of the abdominal dropsy,—but there is superadded pulmonary engorgement, difficult breathing, an increasing venosity, and consequently a more diffuse dropsy; serous effusion infiltrating the lower extremities. In such circumstances it is in vain to expect relief from powerful hydragogue purgatives alone."

DILATATION OF THE DUCT OF STENO IN A GLASSBLOWER.—Dr. Tillaux reports, in the *Bulletin Général de Thérapeutique Médicale et Chirurgicale* for April 15, the following curious case. The patient was a young man aged 20, a glass-blower by occupation, who presented a tumor about the size of a large nut, situated a little above and in front of the angle of the jaw. Upon pressure, it was found to disappear almost entirely, with a gurgling noise, but it reappeared when the patient distended the cheeks during expiration. The cyst was punctured and injected with milk, which, when pressure was afterwards made upon the tumor, could be seen to flow from the orifice of the duct of Steno, showing that the rare accident of dilatation of the duct had taken place in consequence of the continued distention of the cheeks in glassblowing. Dr. Tillaux says that the mechanism by which the duct of Steno opens into the mouth resembles that by which the ureter opens into the bladder. It is difficult, therefore, to understand how even air can penetrate the duct from without. The tumor disappeared entirely under continued compression systematically carried out. If this had failed, M. Tillaux would have had recourse to injections of iodine.

PULVIS GLYCYRRHIZÆ COMPOSITUS.—The want of a mild but effective aperient, of convenient form and without any of the disagreeable concomitants, induces Dr. David Page to call attention in *The Practitioner* for May to the compound liquorice powder of the Prussian Pharmacopoeia, first introduced into practice in Scotland by Dr. J. Warburton Begbie. It is composed of the following constituents, so prepared as to form when incorporated an almost impalpable powder: Senna-leaves, ℥vj; liquorice-root, ℥vj; fennel-seed, ℥ij; sulphur, ℥ij; refined sugar, ℥xviiij. The usual dose is a small teaspoonful at bedtime in water, with which it is easily mixable, forming an agreeable draught. Children readily take it, with the belief that it is a sweetmeat. The motions produced by this powder are soft but well formed. It will be found especially useful in the treatment of constipation resulting from atony of the bowel.

PSEUDO-HYPERTROPHIC PARALYSIS.—Knoll had the opportunity (*Centralblatt*, April 13; from the *Wien. Medic. Jahrb.*, 1. Heft, 1872, 36. Sn.) of examining the muscles of a boy, aged 13, affected with this disease. He found that there was an increased growth of connective tissue, and that the muscles, instead of feeling soft, were very hard and firm. No traces of fatty degeneration were discovered. Dr. Knoll is therefore inclined to think that the fatty degeneration of the muscles, which has been described by authors, is a later stage of the disease. He says we are not yet in possession of a sufficient number of facts to enable us to decide the question whether this disease begins in the muscles themselves, or is the result of an affection of the central nervous system.

A DIAGNOSTIC SIGN OF EXTRA-CAPSULAR FRACTURES OF THE NECK OF THE FEMUR.—In a recent monograph upon the subject, M. Jankerguistel (*The Boston Medical and Surgical Journal*, May 23; from *L'Union Médicale*) arrives at the following conclusions:

1. Increase in the size of the great trochanter is an accurate and constant sign of extra-capsular fractures of the neck of the femur.

2. The presence of this sign, once ascertained, enables the surgeon to dispense with all those manipulations, often dangerous, always painful, which are necessary to determine crepitation or abnormal mobility.

3. The study of the sign alluded to permits accuracy of diagnosis, without rendering the prognosis more grave, or without compromising a cure.

VERATRIA IN PNEUMONIA.—Alt treated several cases of pneumonia (*Centralblatt*, March 30, 1872; from the *Deutsch. Archiv f. Klin. Med.*, ix.) with veratria, which was given in doses of from one-twentieth to one-twelfth of a grain until nausea or vomiting, or until a marked effect upon the pulse and temperature, was produced. In a very few cases the local inflammation diminished after the use of the medicine, but, as a general rule, an increase in extent or in intensity of the pneumonia took place, and this was observed even when the veratria appeared to exert an influence upon the pulse and temperature.

TINCTURE OF IODINE IN VOMITING.—Schneider of Offenbourg (*The Doctor*, April 1, 1872) administered tincture of iodine in doses of ten drops on sugar thrice daily to a patient who was troubled with salivation and vomiting after intermittent fever. Although the vomiting had proved rebellious to all other treatment, it yielded to tincture of iodine.

ILEUS SUCCESSFULLY TREATED BY ELECTRICITY.—Dr. Bogdán reports in the *Wiener Medizinische Presse*, March 10, 1872, a case of ileus successfully treated by electro-magnetism after the more usual remedies had failed to afford relief.

MISCELLANY.

MULTIPLE BIRTHS AND STERILITY.—In the course of an article "On Hereditary Transmission of Structural Peculiarities," in *The Medico-Chirurgical Review* for April, Dr. John Ogle introduces the following extract from a letter of Dr. Shorthouse, the author of an essay on the Physiology of Breeding: "If I am convinced of any one thing more than another relating to the function of reproduction, it is that impotency, sterility, the procreation of twins, and the tendency to abort, are but phases of the same conditions. The mere procreation of twins is no proof of extraordinary virility; on the contrary, it is coexistent with a condition like that of impotency. One of the families of thorough-bred horses is known as the Pantaloon line, because about thirty years ago a horse of that name was famous on the turf. It is a singular fact that the majority of his daughters have a tendency to barrenness; but, if they do happen to get a foal, they are very likely to produce twins, or to slip twins before they have gone the full period. They are either sterile or supernaturally fruitful. The sons, too, of Pantaloon were all but impotent. One of them (Windhound) covered thirteen mares one year at the Rawcliffe stud; eleven of these were barren, and one of the other two produced twins. Hobbie Noble, another son of Pantaloon, a brother of Windhound, was almost impotent in his early life, and quite so during his later years, all the mares put to him proving barren."

ALUMNI MEETINGS.—An opportunity was afforded, by the recent meeting of the American Medical Association in this

city, for reunions of the alumni of our two schools to take place. On Wednesday (May 8), at the Jefferson Medical College, Dr. Addinell Hewson welcomed the alumni of the school, who were attending the Convention, to their alma mater. After the conclusion of the address, they were entertained by Dr. Gross, Professor of Surgery, at his residence. On Thursday the alumni of the Medical Department of the University of Pennsylvania met at the hall of the University. Addresses were made by Professor Agnew and by Dr. William Pepper. Much satisfaction was felt and expressed at the meeting, that the present prospects of the University Hospital are so exceedingly favorable.

A VALUABLE LIBRARY NEARLY DESTROYED.—The library of the Medical Society of London was recently nearly destroyed by fire, which is supposed to have originated from a leakage in the gas-metre. Happily, the flames were discovered by the Registrar before they had made much headway, and the damage will be, it is said, comparatively small. Had the fire extended, a total destruction of some of the most valuable and curious books known would have occurred.

CHANGES AT THE MASSACHUSETTS GENERAL HOSPITAL.—Dr. Shaw has resigned his position as Resident Physician, and Dr. Norton Folsom has been appointed by the trustees of the institution in his place. Dr. Shaw will remain at the hospital until the autumn, when he will resume private practice. Dr. J. Collins Warren has been chosen one of the surgeons to out-patients, and Dr. Edward N. Whittier one of the physicians to out-patients.

SEA-WATER IN LONDON.—There is a project on foot, and there is reason to believe that it will be successful, to bring the sea-water direct from the ocean to London. The water is to be drawn from a pure source a quarter of a mile below low-water mark, west of Brighton, and raised by a series of pumping-engines to the summit of Dyke Hill, whence it will gravitate through enamelled pipes to London. The engineer's calculations are for the delivery of half a million of gallons every twenty-four hours. It is said that the charge at which the sea-water will be supplied will bring its use within the reach of all classes of the community.

It is also proposed to bring up to London sea-water in lighters from the mouth of the Thames, which is then to be discharged into floating-baths.

ANECDOTE OF DR. JENNER.—We take the following anecdote of this distinguished man from the *Medical Record*: The discoverer of vaccination, having discontinued his professional visits to a patient on account of her improved condition, sent a couple of ducks to the mother of the convalescent lady, accompanying the present with the following note:

"I've despatched, my dear madam, this scrap of a letter,
To say that Miss Lucy is very much better;
A regular doctor no longer she lacks,
And therefore I've sent her a couple of quacks."

The lady addressed returned thanks with this:

"Yes, 'twas polite, truly, my very good friend,
Thus 'a couple of quacks' to your patient to send,
Since there's nothing so likely as 'quacks,' it is plain,
To make work for a 'regular' doctor again."

A BIOGRAPHY OF SIR JAMES Y. SIMPSON, BART.—The Rev. John Duns, M.D., F.R.S.E., is about to write the life of his friend Sir James Y. Simpson. It is said that he possesses the proper qualifications for the task.

MEDICAL AND SURGICAL HISTORY OF THE WAR.—The first part of the Medical and Surgical History of the War authorized by Act of Congress, approved July 28, 1866, and Joint Resolution of Congress No. 20, approved March 3, 1869,—compiled under direction of the Surgeon-General U.S.A.,—contains the completed medical statistics (726 pages) of sickness, mortality, and discharge from service for disability during the war, with three hundred and sixty-five pages of appended documents, consisting of extracts from the reports of medical directors of armies in the field, and other medical reports of historical value and interest; a chronological table of all battles and engagements of the war of which any report or record has been made, and five hundred pages of surgical matter, comprising all wounds and injuries of the head, neck, and chest, with a full discussion of each class. The material and data remaining on hand, much of which is already classified and tabulated for the completion of this work, will, with the utmost possible condensation, form two more parts similar to this, each containing an equal amount of medical and surgical matter. The succeeding medical portion will describe, discuss, and illustrate, by engravings and chromos, the symptoms, pathology, and treatment of those diseases which were the chief causes of the sickness and mortality recorded in the first portion, such as camp fever, camp diarrhoea and dysentery, pneumonia, camp measles, smallpox, and the like, with histories of cases, records of autopsies, and special reports. The surgical portion will comprise wounds and injuries of the abdomen and extremities, surgical operations (major amputations, 30,000; excisions of large joints, 5000; ligations of large arteries, 800) and their results, with a vast amount of information upon such surgical diseases as pyæmia, osteo-myelitis, hospital gangrene, tetanus, etc., with the illustrations which the importance of these subjects demands. A report upon hospital construction and administration, modes of transport of the sick and wounded, and the distribution of medical supplies during the war, will complete the work.

TOLERANCE OF TOBACCO.—A remarkable instance of tolerance by the human system of the excessive use of tobacco is given in *The Lancet* for May 11. A gentleman of Rotterdam, named Klaës, who was known as “the King of Smokers,” has just died in his eightieth year, and is said to have consumed during his long life more than four tons of tobacco. The ruling passion was apparent in the will of the deceased, and in his eccentric request that his oak coffin might be lined with the cedar of his old cigar-boxes, and that a box of French caporal and a packet of old Dutch tobacco might be placed at its foot, and by the side of his body his favorite pipe, together with matches, flint and steel, and tinder.

EARLY PREGNANCY.—Mr. Thomas Pope, Cleobury Mortimer, in a communication to the *British Medical Journal*, states that during the course of his long practice, having been apprenticed in the year 1795, he attended three parturient patients, the age of each being less than thirteen years. The mothers and children did well. In the neighboring churchyard of Rock, Mr. Pope states that there is engraved on a tombstone the following lines:

“Ten years I was a maid,
One year I was a wife,
One day I was a mother,
And then I lost my life.”

The muse evidently intended to show that the subject of his lyric had been a mother at the age of eleven years.

A DANGEROUS OPERATION.—The following singular case is reported in the *Medical Times and Gazette* for May 4: A surgeon was charged with having pulled out a boy's tooth against his will. He pleaded guilty. It was explained that a number of boys had annoyed the doctor, and that he seized one of them, took him into his house, and extracted one of his front teeth against his will. The sheriff fined the accused one pound or seven days. The fine was paid.

MORTALITY FROM SMALLPOX.—The number of deaths from smallpox in Philadelphia during the weeks ending May 18 and 25, 1872, were respectively 29 and 35, of which 38 were of minors.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending	
	May 18.	May 25.
Consumption	43	50
Other Diseases of Respiratory Organs	38	26
Diseases of Organs of Circulation	14	21
Diseases of Brain and Nervous System	60	58
Diseases of the Digestive Organs	26	17
Diseases of the Genito-Urinary Organs	11	4
Zymotic Diseases	53	61
Cancer	6	9
Casualties	8	13
Debility	28	47
Intemperance	2	5
Old Age	13	10
Scrofula	2	0
Stillborn	13	16
Suicide	0	3
Syphilis	1	0
Tetanus	1	1
Unclassifiable	8	13
Unknown	1	0
Totals	328	354
Adults	161	178
Minors	167	176

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM MAY 5, 1872, TO MAY 18, 1872, INCLUSIVE.

SWIFT, E., SURGEON.—By S. O. 104, War Department, A. G. O., May 3, 1872, to proceed to Washington, D.C., for the purpose of settling his accounts, and, upon completion, to return to his proper station.

CAMPBELL, JNO., SURGEON.—By S. O. 107, War Department, A. G. O., May 7, 1872, to report to the Commanding General Department of the East, for assignment to duty.

BAILY, J. C., SURGEON.—By S. O. 65, Department of California, May 4, 1872, assigned to duty as post-surgeon at Camp Halleck, Nevada.

WEEDS, J. F., SURGEON.—By S. O. 93, Department of the South, May 6, 1872, granted leave of absence for twenty days.

McELDERRY, H., ASSISTANT-SURGEON.—By S. O. 41, Department of the Columbia, April 22, 1872, assigned to duty as post-surgeon at Fort Klamath, Oregon.

BARTHOLF, JNO. H., ASSISTANT-SURGEON.—By S. O. 97, Department of the South, May 11, 1872, on surgeon's certificate of disability, with permission to apply to the Adjutant-General for an extension of thirty days.

KOEPFER, E. A., ASSISTANT-SURGEON.—By S. O. 87, Department of Texas, May 6, 1872, assigned to duty at Ft. McKavett, Texas.

ROSE, GEORGE S., ASSISTANT-SURGEON.—By S. O. 76, Military Division of the Pacific, May 8, 1872, on surgeon's certificate of disability, granted leave of absence for two months, with permission to go beyond the limits of the Military Division of the Pacific.

WILSON, WM. J., ASSISTANT-SURGEON.—By S. O. 72, District of New Mexico, May 6, 1872, assigned to duty at Fort Bayard, N.M.

DELANY, ALFRED, ASSISTANT-SURGEON.—By S. O. 72, c. s., District of New Mexico, assigned to duty at Fort Selden, N. M.

WEISEL, D., ASSISTANT-SURGEON.—By S. O. 87, c. s., Department of Texas, assigned to duty at Fort Richardson, Texas.

SATURDAY, JUNE 15, 1872.

ORIGINAL LECTURES.

ON EMETICS.

BY JOSEPH CARSON, M.D.,

Professor of Materia Medica and Pharmacy in the University of Pennsylvania.

LECTURE I.

THIS class of medicinal agents derive their name from the Greek word *εμεω*, to throw or cast up; the corresponding word in Latin is *vomo*; and hence the use of the expressions *emesis* and *vomiting* to indicate the effects produced by such articles.

Emetics may be defined to be such substances as either directly or indirectly affect the stomach, causing the expulsion of its contents through the cardiac orifice, the œsophagus, and the mouth.

The operation of vomiting is highly complex, requiring the consent and simultaneous movement of several organs. It therefore especially demands attentive examination.

Mechanism of vomiting.—Much discussion has been elicited in the attempt to determine the mechanism of vomiting, and no little perplexity has arisen from the conflicting and opposite interpretations of the phenomena presented to observation. To explain the co-ordination of movements in the organs interested in the act of vomiting, entails the necessity of presenting the facts in such a way as to reconcile their seeming incompatibility. This act is among the most perfect of those operations of the economy depending upon the sympathies.

The organs interested in the act of vomiting are the stomach and parts constituting the upper portion of the alimentary tube, the respiratory apparatus and abdominal muscles, and—as the media of consentaneous movements—the nerves and the nerve-centres.

Of all the organs interested, it would be supposed at first sight that the stomach itself is most instrumental in the elimination of its contents. Indeed, the doctrine that for centuries was entertained attributed emesis to a sudden and spasmodic effort of that organ, and allowed but an accessory influence to the diaphragm and abdominal muscles. Under this view of the subject, the stomach must be powerfully active.

Of the doctrine thus stated, Magendie remarks, “At first sight one sees no objection to it, and hence it is that this *scholastic doctrine* of vomiting is so extensively received, and that good minds are so loth to abandon it. But it little matters to the physician to know if it is simple and easy to comprehend; it is of more importance to know if it is true.”*

The supposition that the stomach is fully capable of expelling its contents by its own contraction was first called in question in 1681, by Bayle, who attributed the operation to the pressure of the diaphragm and abdominal muscles upon the organ.† His opinion was founded upon experiments.‡ Shortly after, similar experiments were made by Chirac, and with the same conclusion.§ Towards the middle of the last century the discussion

was renewed, and new facts were presented by B. Schwartz in favor of the idea that the stomach was passive in the act of vomiting, and that this was accomplished by the contraction of the diaphragm and the abdominal muscles.|| This opinion was adopted by John Hunter,¶ but, on the other hand, was opposed by Haller.**

In 1813, new experiments were made by Magendie, with the view of determining this vexed question of the mechanism of vomiting, and no uncertainty was left with respect to the part assigned to the diaphragm and the abdominal muscles. Having provoked vomiting by the injection of tartar emetic into the veins of a dog, he opened the abdomen and placed the stomach exterior to the muscles. The efforts to vomit continued, but the stomach remained flaccid, and no expulsion of its contents occurred. In a second experiment, the abdominal muscles were cut away, and the diaphragm was paralyzed by cutting the phrenic nerves, the stomach remaining in situ, when it was not able to eject its contents under the influence of the emetic injected into the circulation. He finally removed the stomach, and adjusted a fresh hog's-bladder, moderately filled with water, to the œsophagus, placing it under the control of the diaphragm and abdominal muscles, when, from the influence of the emetic substance, it was so pressed upon as to disgorge the fluid.††

In confirmation of this view, an interesting case has been reported by M. Lapine, in which the stomach protruded through a wound in the abdomen, thus placing the organ beyond any pressure of the abdominal muscles. There was no obstruction at the cardiac orifice of the stomach, and, although strenuous efforts were made by retching, vomiting could not be accomplished until the organ was returned into the abdomen.‡‡

From the results of the experiments that have been presented above, two facts may positively be admitted: 1. That, as an ordinary result, the stomach is incapable by its own efforts alone to discharge its contents. 2. That pressure is absolutely necessary.

It is not to be concluded, however, that while the pressure of the abdominal muscles is essential to perfect vomiting, the stomach itself is without contractions in the operation. Haller took the ground that where muscular fibre exists there must be found contractility, and hence in vomiting contraction does occur. This has been noticed by many physiologists.

Haller contended for two species of contractions on the part of the muscular fibres of the stomach: one a light antiperistaltic contraction in the circular fibres of the organ, from the pylorus to the cardia; the other a contraction of the fibres of the œsophagus that are expanded obliquely over the two sides of the stomach. The two briskly accomplished he supposed would empty the organ. §§

The power of regurgitation possessed by the stomach is so well known as to admit of no dispute, and this must depend, at least in a measure, on the removal of resistance at the cardiac orifice and on sudden contraction of the stomach. But Wepfer, Portal, Highton, and Rudolphi expressly state that they have seen contractions of the stomach during vomiting, without, however, invalidating the positions taken by Bayle, Hunter, and Magendie, that the abdominal muscles are necessary to the accomplishment of the act of vomiting. Indeed, Magendie did not deny contraction on the part

* Dict. de Médecine et de Chirurgie pratiques, vol. xv., art. “Vomissement,” par Magendie.

† Institutiones Physicæ, tom. iii. p. 349.

‡ Bayle states that if the finger is introduced into the stomach of a dog while vomiting, no contraction of the organ is felt; and if the abdomen is extensively opened, vomiting cannot take place; but when the parts are brought together by a suture, the vomiting is brought on by the pressure of the abdominal muscles.

§ Experimentum Anatomicum circa Naturam Vomitionis. (Ephemerides des Curies de la Nature, 1686, Obs. 125.)

|| Dissert. inaug. continens Observationes nonnullas de Vomitu, etc. B. Schwartz.

¶ Hunter's (John) Works,—on Digestion.

** Elementa Physiologiæ, tom. vi. p. 281.

†† Magendie, Mémoire sur le Vomissement. Paris, 1813, 8vo.

‡‡ Choix d'Observations. Bulletin de l'Académie de Médecine, tom. ix.

p. 146.

§§ Op. cit.

of the stomach, but contended that as this contraction was of a slow and gradual peristaltic character, it would not be brought into play with sufficient energy to excite vomiting; "on the contrary, all that is known of the contractions of the stomach appears at most to lead us to believe that they act as a feeble auxiliary."*

That these movements have a direction reverse to those that are normal is shown by the fact of the contents of the stomach being expelled through the cardiac and not through the pyloric orifice. The researches of Budge have led him to conclude that these contractions tend to thrust the contents of the stomach, during vomiting, from the pyloric towards the cardiac orifice;† and no other inference can be received from the experiments of Maingnault, who tied the intestine just beyond the pyloric orifice, than that antiperistaltic movements occur. When the stomach solely acts, nothing more than regurgitation can be said to result.‡ This inverted functional movement is not confined to the stomach; it may take place in the duodenum or intestines; and this is shown not only in the discharge from the stomach of bilious matter, but, in certain cases of intestinal obstruction, of stercoraceous products.

The statement given is in accordance with the observations of the Committee of the Academy of Paris, who found that vomiting could not take place without external pressure upon the stomach, and that this pressure need only be very slight; for that after the abdominal muscles had been divided, and the diaphragm paralyzed, fluid could be pressed from the stomach into the œsophagus by the inferior ribs being drawn down upon the epigastric region: they perceived no motion of the stomach itself, except the circular contractions in the neighborhood of the pylorus.§

That vomiting can occur, however, irrespective of these movements of the stomach, is demonstrated by a case mentioned by Longet, where a woman who had swallowed sulphuric acid was affected with vomiting until her death. On examination, it was found that the parietes of the stomach had been entirely destroyed by the poison, and adventitious pouches formed with the abdominal walls.|| This disproves the argument of Lieutaud, that patients may be harassed by nausea, but not be able to vomit from paralysis of the coats of the stomach.¶

With respect to this movement on the part of the stomach, the following remarks of Müller are worthy of notice:

"An important circumstance, which has hitherto been too much disregarded, is the existence of a kind of imperceptible contraction of the whole stomach, by which its entire volume is diminished without individual parts being seen to contract. I have often observed such a contraction of the stomach when vomiting was not taking place. The contraction of the stomach during vomiting appears to me to be an indubitable fact, for it can be felt by the person about to vomit; although it has not so great a share in the production of vomiting as has been ascribed to it, for the stomach is able to propagate the irritation applied immediately to itself to other muscles."**

As the contractions of the stomach cannot produce vomiting, it is admitted that it must be accomplished by pressure. Magendie and his followers supposed it to be accomplished by the contractions of the diaphragm and of the abdominal muscles. We are here met by the fact, however, that the contractions of the diaphragm and of

the abdominal muscles are not simultaneous, so that the stomach, as it were, can be caught between them. When in inspiration the diaphragm contracts so as to expand the chest, the abdominal muscles become relaxed; and the opposite of this is the case when the abdominal muscles contract,—the diaphragm relaxes. Vomiting occurs not during inspiration, when contraction of the diaphragm takes place, but after this has been accomplished, at the time the abdominal muscles contract to aid in expiration; and this entails relaxation of the diaphragm. How, then, are we to explain the mechanism of vomiting from pressure? We are indebted to Dr. Marshall Hall for the solution of this difficult and complicated problem; and it is this:

When nausea and a disposition to vomit occur, there is excited a full inspiration, with rising of the chest and contraction of the diaphragm, so as fully to admit the air into the lungs. The expulsive effort then commences; there are lifting of the larynx, closure of the glottis, expansion of the pharynx, and opening of the cardiac aperture of the stomach, simultaneously with the contraction of the abdominal muscles. The closure of the glottis retains the air in the lungs which sustains the diaphragm, and this muscular structure floats as it were between the thoracic and abdominal cavities. Against the diaphragm thus supported the stomach is pressed by the contraction of the abdominal muscles, with the discharge of its contents; the last act of the operation being the yielding of the larynx, opening of the glottis, and full forcible expiration. As has been stated by Dr. Hall, vomiting itself is an effort not of inspiration, but of expiration.††

That a full occupancy of the chest by air is necessary so as to sustain the diaphragm, and that this is secured by lifting the larynx, was proved by experiment. The trachea was opened in dogs, when, in the efforts to vomit, the air was driven forcibly through the orifice; and again, when the lung was opened by a wound in the thorax, the air, as well as a portion of the lung, was driven through the opening. In either case vomiting was but partially and imperfectly effected.

The admission of the foregoing explanation is compatible with the position of the stomach on the thoracic side of the diaphragm; and such a case has been reported by Graves and Stokes.‡‡ Another case has been mentioned by Wepfer, where the stomach had passed through a wound of the diaphragm.§§ Under such circumstances the lungs themselves constitute, when filled with air, the points of resistance to the abdominal pressure, and subserve the purpose of maintaining pressure. Again, the diaphragm may be paralyzed and not contract, but yet be supported by the lungs.¶¶

The œsophagus would appear to play a part in this operation, as is shown by the experiments of Beclard. He laid bare this tube in the neck, and, having opened the abdominal cavity so as to allow him to cut the œsophagus at its connection with the stomach, he drew it out of the wound, in order to observe its movements: when vomiting was produced, he saw the canal contract and draw itself with jerks towards the pharynx.¶¶ A case is recorded where the patient labored under obstruction at the cardiac orifice of the stomach. From this cause the food that was swallowed accumulated in the œsophagus, and was then rejected by vomiting, but at the same time this act was accompanied with spasmodic contraction of the abdominal muscles.*** In regurgitation, the motion of the œsophagus specified must

* Dict. de Méd. et de Chirurg., art. "Vomissement," tom. xv. p. 768.

† Budge, Die Lehre vom Erbrechen. Bonn, 1840.

‡ Mémoire sur le Vomissement. Paris, 1813.

§ Müller's Physiology, i. p. 554.

¶ Traité de Physiologie, tom. ii., deuxième partie, p. 141.

** See art. "Vomissement," by Adelon, Dict. de Méd. prat., tom. xxx.

*** Elements of Physiology, by J. Müller, M.D., Professor of Anatomy and Physiology in the University of Berlin. Translated by William Baly, M.D. Vol. i. p. 555.

†† On the Mechanism of the Act of Vomiting, by Marshall Hall, M.D., F.R.S.E., etc. *Lancet*, London, vol. ii., 1828, p. 600.

‡‡ Dublin Hospital Reports, vol. v. p. 84.

§§ A case of the kind is given by Morgagni, De Sedibus et Causis Morborum, tom. iii. epist. 54.

¶¶ Œuvres de Car. Legalleois, Paris, 1824, tom. ii. p. 104.

¶¶ Bulletin de la Soc. de Méd. de Paris, 1813, tom. iii. p. 481.

*** Dr. Marshall Hall. *Lancet*, 1837-38, tom. i. p. 251.

be important, and, from its antiperistaltic character, be accessory to vomiting.

With regard to the connection of the œsophagus with the act of vomiting, Dr. Hall thus expresses himself:

"There are many facts which appear to show that the œsophagus is not without its share of influence on this act; and it is plain that the cardiac orifice must be freely opened, for mere pressure upon the viscera of the abdomen will not in ordinary circumstances evacuate the contents of the stomach. To effect this open state of the cardiac orifice, it is probably necessary that the diaphragm should indeed be in a relaxed rather than in a contracted state."^{*}

The office of the œsophagus is lucidly stated by Adelon:

"This canal in the normal state of digestion is constantly subjected in its inferior third to alternate movements of contraction and dilatation, with the effect of retaining in the stomach the food there accumulated. But they are overcome by the desire to vomit; the œsophagus is drawn by strong jerking efforts upwards, and attracts into its cavity the matters contained in the stomach. It can be conceived that at that moment the lightest pressure exerted upon the stomach by the contiguous muscles promotes expulsion by the cardiac orifice, while were the circumstances inverse the stomach would not respond to the most violent compression from the abdominal muscles and the diaphragm. The œsophagus then plays an important part, and this it is which renders efficient or not the compression from the muscles."[†]

In order to produce the co-ordinate movements involved in the mechanism of vomiting, it is necessary that the nervous system should perform its part in connection with the sympathetic relations that exist between the organs interested. To trace these relations becomes an important portion of the inquiry as to the mode of operation peculiar to emetics. Emetics operate in two ways: either, first, by impressing the stomach, and through reflex action from the irritation induced on its sensitive nerves, calling into operation the consentaneous movement of the organs necessary for the act of vomiting; or, secondly, by being introduced into the circulation and disturbing the vital condition of the nerve centres, producing similar co-ordinate movements. In either case the same nervous centres are interested, and excitomotor power is the efficient force.

If vomiting is produced in the first of these ways, the irritation of the stomach must be communicated to the base of the brain, or upper part of the medulla oblongata, through the pneumogastric nerve, which is the afferent nerve, or that of cognition, in the stomach, by which the aid of the motor nerves is called into requisition. A remarkable fact elicited by the experiments of Magendie was, that when the stomach was removed from the pressure of the abdominal muscles, and there was quiescence of them, the pressure made upon the stomach, or mechanical irritation of the organ, produced the effect of retching, or, in other words, the abdominal muscles were reflexedly under the control of the stomach. Whether the nervous centre—*i.e.* the medulla oblongata—is disturbed either in this manner, or by the introduction of an emetic article into the circulation, so as thus to influence it, the further use of the nerves is to convey the influence to the muscles concerned in the operation. Through the instrumentality of the inferior laryngeal nerves the larynx is lifted and closed; through the intercostal and the phrenic nerves the chest is expanded in inspiration; and through the abdominal spinal nerves the muscles of the abdomen are brought into operation and pressure made upon the stomach. To these may be added, for the dilatation of the pharynx and œsophagus, the motor-pharyngeal and œsophagal

nerves; and in connection with the elevation of the shoulders, the spinal accessory.[‡] Dr. M. Hall refers to the action of the nerves controlling the cardiac orifice of the stomach as aiding in dilatation, but M. Rühle has stated that the force necessary to overcome the resistance of the cardia is much less during vomiting than under ordinary circumstances.

The motions of the stomach, as well as of the intestines, appear to be wholly dependent on the sympathetic nerve. Müller states that "the peristaltic motions of both continue when they are removed from their connections in the body." Wepfer observed this of the stomach, and others have noticed it with regard to the intestines.[§]

It would appear that of the nerves that participate in the act of vomiting, the most important are the motor nerves, and that these must be brought into full sympathetic accord. Should this be prevented, the want of simultaneous and united effort on the part of the organs interested would defeat the effectiveness of the operation. As the motor nerves command the muscular movements by which the act of vomiting is accomplished, it can be readily understood that division or paralysis of any of them—as, for instance, those of the larynx, of the chest, or of the abdomen—will interfere with or prevent vomiting from taking place. The functional activity of the *efferent* or motor nerves is absolutely necessary; but as vomiting may be induced by impressing the medulla oblongata, irrespective of excitator or *afferent* influence, it matters not if this be interrupted, provided the *efferent* power be undisturbed, and hence the section of the pneumogastric does not interdict the operation of an emetic that has been absorbed. The effect of cutting the pneumogastric is ultimately to engorge the lungs with black blood, which, acting as a narcotic on the medulla, blunts its sensibility and interferes with impressions received or communicated.

Whether the pneumogastric has motor fibre in its composition or not, the fact is admitted by physiologists that it is an afferent or sensitive nerve, and hence its section only interferes with vomiting so far as this act can have an eccentric origin in the stomach. Dr. Carpenter states as the first cause of vomiting the contact of irritating substances with the mucous membrane of the stomach itself. "These, however, cannot act upon more than its muscular coat by *direct* stimulation, and their operation upon the associated muscles must take place by reflection, through the "nervous circle" furnished by the pneumogastrics and the motor nerves of expiration."^{||} But the eccentric origin of vomiting is not restricted to the stomach; it may occur from the uvula and the fauces, the pharynx and upper part of the larynx, as is shown by titillating the parts with the finger or a feather, or in choking from foreign bodies that have lodged in the gullet, or coughing, as in whooping-cough. In these cases the reflex action which is excited comes from the irritative impression upon the sensory nerves of the parts, and brings on the whole train of associate movements involved in vomiting. The excitator nerve in the instances alluded to is the faucial branch of the trifacial. In individuals who have the power of vomiting spontaneously, irrespective of the voluntary control possessed over the respiratory movements and the pressure that can be made by the abdominal muscles, there is a capability of bringing into play the pharyngeal muscles, with a reflex excitation from this source which is transmitted to the œsophagus and the stomach.

[‡] On the Diseases and Derangements of the Nervous System, etc., by Marshall Hall, M.D., F.R.S., etc. London, 1841, p. 710. See *Léçons sur la Physiologie*, etc., par H. Milne-Edwards, Paris, 1861, tome vi. p. 332, note.

[§] *Op. cit.*, i. 559.

^{||} Principles of Human Physiology, etc., by William B. Carpenter, M.D., etc., Amer. ed., 1853, p. 408.

* *Lancet*, vol. ii. p. 601.

† Dictionnaire de Médecine pratique, art. "Vomissement," tome 30.

That the vagus nerve is not a nerve of motion to the stomach is shown by Müller, who says, "The usual opinion is that the irritation being excited in the vagus nerve by the cerebral affection (in diseases of the brain), that nerve excites contractions of the stomach; but this it is difficult to believe, for, distinct as are the contractions of the œsophagus which may be excited by irritation of the nervus vagus mechanically or by galvanism, *I have never succeeded in producing even a single distinct contraction of the stomach by that means*, although I have made repeated experiments with that view on rabbits, and carnivorous and granivorous birds, and have employed the strongest mechanical irritation, and even a very powerful galvanic pile,—the vagus being in the last case insulated. Even the muscular gizzard of birds cannot be made to contract in the slightest degree. Magendie and Mayo have made similar observations.*"

Légros and Onimus found that a continued descending current had the effect of suspending the movements of the stomach when applied to the inferior end of the pneumogastric when cut. When an ascendant current was applied to the superior cut end, vomiting could be produced.†

The effect of dividing the pneumogastric nerve was tested by Dr. Hoppe, of Berlin, who found that it did not interfere with the act of vomiting, but, on the contrary, excited it. When the pneumogastric nerve was cut, he found that efforts of inspiration, though slow, were forced and violent, and that "vomiting, which follows immediately the section of both pneumogastric nerves, is provoked by the forced efforts the animals make to inspire."

The fact that vomiting was frequently induced by cutting the pneumogastric nerves was stated by Rolando.‡ In these cases the incitation is located in the throat.§

Magendie informs us that the contractions of the œsophagus are influenced by the pneumogastric nerves, and cease when these nerves are cut, as he himself has proved. The explanation of this non-action of the œsophagus is, that as the pneumogastric is an excitomotor nerve, when it is cut the muscular fibres of the œsophagus are not called into action, and a passive state is induced.

But other sympathies may be brought into operation. Vomiting occurs in hernia, in diseases of the intestines, and injuries to sensitive parts, as by blows upon the testicles. It also takes place in cases of the passage of gall-stones or renal calculi. The reflex sympathies in connection with gestation originate the vomiting so constantly observed in pregnant women; and this likewise is true as regards the misplaced uterus.

When vomiting proceeds from derangement of the circulation of the brain, or even of nutrition, or disease of the central organ, the condition of this organ may originate vomiting, or may be such as to constitute excessive susceptibility to impressions originating in the stomach or elsewhere. The term "brain-vomiting" is used in contradistinction to that arising from the stomach; and yet there is little difference between the two, for, with excessive excitability of the medulla oblongata, the slightest impression upon the stomach communicated to this centre may induce all the associated movements of vomiting. This is seen in the sickness of stomach attendant on loss of blood; and it may exist in disease of the brain, as tuberculosis. Disturbance of the circulation of the brain in cases of sea-sickness, and, what is analogous to it, the effect of swinging or rotary motion, is the cause of vomiting. Disagreeable sights, odors, or tastes, or even recollections of them, may

affect the brain sensorially, and operate in the same way. Vomiting frequently follows upon violence to the head, as a blow upon it.

It is probable that when emetic substances are absorbed their effect is expended upon the nutrition of the base of the brain. In Magendie's experiments, tartar emetic and other substances produced vomiting; even the injection of distilled water into the circulation was followed by this result. Articles of a sedative character produce their effects by absorption, thus modifying the organic condition of the motor tract of the brain. It is in this way that opium, colchicum, digitalis and tobacco, aconite and veratrum viride, produce vomiting with great prostration. Under the full influence of these articles the stomach may remain quiescent until food is taken, when it excites sympathetic movements. This excitability is analogous to convulsibility, which leads to convulsions, and which seems to belong to the entire motor tract of the brain and spinal marrow.¶ In many cases a state of exhaustion, or loss of nerve-generating force, is at the foundation of this excessive susceptibility to impressions that occasion vomiting. Hysterical vomiting is of this nature. It has been stated by authorities that emesis is maintained by habit. The probability is that it is maintained either by the cause above specified or by obscure disease.

Vomiting, as a symptom of disease, always merits the serious consideration of the physician, "since it is most frequently the expression of serious trouble in the functions of the nervous system or in the composition of the blood,—particularly if the phenomenon be spontaneous and has no apparent especial cause in the digestive apparatus."¶

It must be perceived from this exposition that the centric and eccentric origin of vomiting are most intimately blended.

Some individuals possess the faculty of ejecting the contents of their stomachs at will. In this case the act is accomplished by bringing to bear the pressure of the abdominal muscles upon the stomach after a full inspiration, and by exercising the voluntary power in efforts of retching. Irrespective of mere voluntary effort, the reflex movements may be brought into play by this attempt, especially from the throat, as in the case of the finger being introduced into it. Magendie states, "I have many times seen such persons press their hand strongly upon the epigastric region in order to aid the abdominal muscles. This faculty of emptying the stomach is said to have been extensively practised by the ancient Romans, and in modern times has been cultivated by gluttons."

The force with which the operation of an emetic takes place has been adduced as an argument by Magendie against the doctrine that the act is accomplished by the stomach alone. The matters ejected are not only discharged from the mouth, but they are thrown out with violence and scattered in all directions. They come not from the mouth alone, but through the nares. "It may be judged from these effects that the pressure is enormous that occasions their expulsion from the stomach."***

The part which is taken in the operation of emetics by the nervous centres is further shown by the diffi-

¶ In speaking of the mode of action of emetics introduced into the circulation, Müller states that "there is no very evident explanation of it, or, rather, we do not possess sufficient data to enable us to determine the question in a decided manner." He supposes that an emetic, as tartar emetic, introduced into the blood, acts upon the organs which participate in the act of vomiting through the medium of their blood-vessels (vol. i. p. 557). From what has been expressed in the text, it is clear that the impression of emetic substances introduced into the circulation is made upon the nervous centres,—that an inordinate tendency to disturbance is created, which may assume the form of vomiting by reflex action from the stomach, or even from other organs.

¶ Magendie, loc. cit.

*** Dictionnaire de Médecine et de Chirurgie pratiques, vol. xv. p. 766.

* Elements of Physiology, vol. i. p. 557. Gazette Médicale, 1841, p. 85.

† Journal de l'Anatomie et de Physiologie, 1869, No. 2.

‡ Archives Générales de Médecine, tome v., Paris, 1824, p. 182.

§ This incitation proceeds from the trifacial.

culty of bringing an individual under their operation who is in a profoundly narcotized condition, or laboring under an apoplectic attack, although a certain degree of narcotism in particular idiosyncrasies may induce vomiting, and in the incipency of apoplectic attacks it is not an unusual concomitant. Where the nervous centre is obtunded, it is with difficulty or not at all likely to be impressed. The removal of this condition of the brain becomes necessary to bring on vomiting in cases of narcotic poison. It may be accomplished by the dash of cold water on the head, or by revulsives, or by local abstraction of blood.

ORIGINAL COMMUNICATIONS.

CASE OF POPLITEAL ANEURISM CURED BY COMPRESSION,

UNDER THE CARE OF DR. D. HAYES AGNEW.

BY JEROME LONGENECKER, M.D.

THE patient, an Irishman by birth, a watchman by occupation, is sixty years of age, and has enjoyed good health, having entirely escaped illness for the past twenty years, until the occurrence of the present disease.

The history of the case, as given by himself, is as follows: About three months ago he noticed that the right leg was considerably swollen, and that the swelling was accompanied by a gradually-increasing pain, rendering locomotion difficult. Upon the application of some liniment, this slowly disappeared. Between three and four weeks later, his attention was attracted by a pain seated in the right popliteal space and to its outer side, and upon examination he discovered a small pulsating tumor, about the size of a pigeon's egg, which afterwards grew rapidly, and was accompanied by a continually-increasing burning pain.

On inspecting the right popliteal space, a tumor, about four inches in length, having a very marked prominence, was visible, situated rather more towards the outer side, and having a full, firm pulsation which could easily be seen, and which corresponded to the pulsation of the femoral artery, and ceased when pressure was made upon the latter. The patient was put under treatment Tuesday, April 9, at 12 M., and this consisted in the use of Bellingham's compressor, the object being to cut off all circulation through the tumor, in the hope that a coagulum would form in the course of five or six hours. The limb was first carefully bandaged from the toes up to the knee, and the instrument adjusted in such a manner as to make pressure upon the femoral artery near the apex of Scarpa's triangle. Muslin compresses were used to protect the skin as much as possible from irritation. In fifteen minutes after the application of the tourniquet, the patient became so restless that it was deemed advisable to administer an anæsthetic. He was accordingly kept under the influence of ether just short of the stage of excitement, until 3 o'clock P.M.; and, although some degree of nausea was produced, vomiting did not occur. At 3 o'clock P.M., the compressor was moved for the first time, the femoral artery being controlled by the fingers of an assistant while the instrument was being reapplied at a point a little higher up. The anæsthetic was now withheld, and when the patient had recovered from its influence some nourishment was given, after which the administration hypodermically of a fourth of a grain of the sulphate of morphia enabled him to endure the pressure so well that the anæsthetic was not again resorted to. The patient now, however, complained a good deal of the burning sensation in his leg consequent upon the enlargement of the anastomosing vessels.

By evening the tumor appeared to be a little more firm, but pulsation still could be detected upon even a slight diminution of the pressure. During the night, the pain becoming more severe, the tourniquet was changed every two hours, and towards morning a fourth of a grain of the sulphate of morphia was given hypodermically.

Wednesday, 11 A.M.—Pulsation considerably diminished, and the tumor much firmer; but, the patient's thigh by this time being so much irritated by the prolonged pressure, it was found necessary to abandon the instruments, and to resort to digital compression, which was done at once. After this form of treatment had been maintained for five hours, the condition of the tumor was tested by slowly diminishing the pressure upon the femoral, and it was found that pulsation had ceased and the parts were quite hard. As a precautionary measure, however, the treatment was continued until Thursday morning at eight o'clock, after which the patient was ordered to remain perfectly quiet in bed.

The total duration of the treatment was forty-four hours:

By Bellingham's Compressor, 23
By digital compression, 21—44.

Beef-essence and milk were given as often as the patient could be induced to take them.

Digital pressure was made at the point where the artery passes over the pubis, but not firmly enough to cut off all blood, a very small portion being allowed to pass under the fingers. The patient was very little—scarcely at all—depressed by its use, notwithstanding the irritated condition of his thigh, the upper portion of which necessarily had to be encroached upon in changing hands. Each assistant was able to press for half an hour before being relieved.

The following-named gentlemen, graduates of the University of Pennsylvania and members of the medical class of 1872-3, generously gave their services; and the successful termination of the case is in a very great degree due to the patience and skill which they manifested throughout: Drs. Valdivieso, Finley, Rea, and Hoff; Messrs. Estrazulas, Ellis, Hopkins, Neil, Hayes, Belford, Ransley, Edwards, McDonald, Rush, Duncan, Guiteras, and Bruen.

XYLOL.

BY RICHARD MOFFETT, M.D.,

Philadelphia, Pa.

THIS is a new remedy, recently discovered by a German chemist, and is used at the Royal Hospital in Berlin, in the treatment of smallpox. It is found in wood-tar and coal-gas naphtha. My first experience in the use of the remedy was in the following case. I was called to Mrs. Sophia H., a German woman, aged forty-two years, on March 27. She was suffering with preliminary symptoms of smallpox, which in a few days developed into the confluent form. My usual treatment failed to give any relief whatever, and she was fast sinking. On April 8 her pulse was 155, respiration 40, tongue brown, dry, and hard; the ends of her fingers and nails were purple, and her face was entirely covered with black scabs. The tonsils and parotid glands became so much affected that it was with the greatest difficulty that anything could be swallowed. She suffered from great restlessness, and was unable to obtain sleep even after taking large doses of chloral and morphia. Having obtained some of the new remedy, xylol,—I determined to try it in her case. I gave her the following prescription:

R.—Olei xylol., gtt. cc;
Pulv. acaciae, q. s.;
Syrupi simplic.,
Aquaë, aa f3j.

S.—A teaspoonful every two hours.

I called the next day, and found her sitting up in bed. All the graver symptoms had disappeared. Her tongue was quite moist, pulse 98, respiration 22. She told me the medicine relieved her at once; and her husband said that after taking three doses she went to sleep, and slept for four hours.

April 14.—The patient is quite talkative, and can swallow without difficulty. From this time forward her convalescence was uninterrupted. At this date, April 19, she is able to go about the house, suffering only from a partial loss of the right eye. She was vaccinated when an infant, but bore no mark. I have tried this remedy in a number of cases since, and its use has always been attended with the most happy results.

PNEUMONIA COMPLICATED WITH SINGULTUS.

BY HORACE Y. EVANS, M.D.

ON the evening of the 23d of February last, I was called to see Mr. R., æt. 30. He had taken a severe cold on the 20th, followed by a chill, fever, headache, pain in right side, and cough. When first seen, he had commenced to expectorate a viscid, bloody sputa. His pulse was 120; respiration, 26. The lower and posterior part of right lung was slightly dull. Subcrepitant râles were heard in the same position. A very marked symptom attending this condition was an excessively nervous state; he could control neither voice nor hands. I ordered poultice, cathartic, potash, and morphia.

24th.—Had a bad night. Pulse, 124; respiration, 26; profuse perspiration. Singultus superseded the cough at six o'clock last evening, and now continues at the rate of fifteen per minute. Posterior and lower part of both lungs dull and crepitant. Continued the poultice, and ordered milk, quinia, and water-ice, and for the hiccough, a combination of chloroform, camphor, and valerian.

25th.—All his symptoms are aggravated. The hiccoughs average twenty-six per minute. Ordered gr. xx of bromide of potassium every two hours, and gave him one-fourth of a grain of morphia hypodermically at night.

26th.—The morphia produced stupor, but did not interrupt or modify the singultus. Pulse, 130; respiration, 36; neither cough nor expectoration. Ordered ammonia, stimulants, milk, quinia, and opium. Dr. Baldwin saw him with me this evening.

The patient's condition continued without material change during the 27th and 28th, during which we employed pressure and belladonna-plaster over the hypogastrium, collodium cum cantharide over the cervical vertebræ, musk, morphia, chloral, and turpentine. I gave him gr. c of hydrate of chloral in four hours, and one-half of a grain of morphia hypodermically in ten hours,—both producing like results—a dull stupor—without in the least palliating the diaphragmatic spasm.

29th.—Dr. A. S. Gerhard saw him in an emergency at ten o'clock last night, and ordered one-sixth of a grain of calomel every hour. The hiccough stopped for thirty minutes at six o'clock this morning, and then returned with former vigor. Pulse, 109; respiration, 40; slight cough and scanty rusty sputa. I continued the calomel until he had taken gr. vi. Gave him oil, and applied ice in a Chapman's bag to the cervical vertebræ two hours at a time,—then omitting it for two hours. After the first application, there was an interruption of the singultus for an hour. The second application was followed by an interruption and sleep of four hours.

March 1.—Pulse, 90; respiration, 25; singultus, 10; a loose cough and abundant rusty sputa; bowels free; urine scanty; uric acid in excess. Continued ice to the neck at intervals of two hours, milk, quinia, and iron.

March 2.—Slept six hours. Pulse, 87; respiration, 26. The spasms of the diaphragm so slight that they produce only a waving motion of the abdominal and thoracic viscera three or four times in a minute. He continues to cough up a large quantity of rusty sputa. Continued ice to neck, beefsteak, milk, quinia, iron, and expectorant mixture.

March 3.—Every vestige of singultus gone. Slept eight hours without morphia.

From this date his recovery was rapid and uninterrupted.

It has been my experience to see a number of cases of disease complicated with hiccough, but I have never before seen an attack so severe and so long-continued terminate in recovery. I cannot but conclude that either the calomel or the ice-bag, or probably both, was the efficient instrumentality. To avoid empiricism and adhere to theory, we credit the result to the ice.

CASES OF CEREBRO-SPINAL MENINGITIS.

BY EUGENE P. BERNARDY, M.D.

I REPORT the following five cases, in order to show that cerebro-spinal meningitis existed in the city during the spring. The cases all came under my care in the short space of one month.

Case I.—M. W., aged 2 years, a strong and healthy child, was suddenly taken with a chill, prostration, pain in the nape of the neck and lower part of the back of the head, headache, eyes congested; the least touch would set the child screaming; tenderness of throat, and vomiting of a yellowish matter; no convulsions, but the head was constantly bent backward. I saw the case about six hours after the attack came on (March 16). I immediately ordered a mustard-bath, applied a blister over the nape of the neck, and gave internally one grain of sulphate of quinia every hour, and a purge of calomel and rhubarb. I saw the case again the same evening: there were evacuations of black, offensive matter; the fever and headache were abated. Quinia was continued; beef-tea and nourishing food were ordered. In one week the patient was discharged, cured.

Case II.—T. H., aged 3 years. The mother, supposing that it was affected with measles, attended to it at first herself; but, the child getting worse, I was sent for on March 21. I found the child completely covered with an eruption of petechiæ. The spots presented some resemblance to those of measles; some were round, but many were perfect squares, of a dark-purple color, and did not disappear on pressure. The face was swollen, and the head retracted; there was pain, on pressure, along the upper part of the spine; convulsions (which, gradually yielding to treatment, left the child in a sort of tonic spasm); vomiting of a yellowish matter; and tenderness of the throat. I ordered the same treatment as in Case I., only adding carbonate of ammonia and whisky. The child, however, never rallied, and, falling into a comatose condition, died quietly on the 23d of March.

Case III.—K. O., aged 16 months. I found the child, March 27, in convulsions. The eyes were injected; there was pain along the upper part of the spine; the pupils were contracted; the face was pinched (especially the forehead); the tongue white; the least touch would throw the child into spasms; the bowels were constipated; there were high fever, and difficulty in swallowing, but no petechiæ. I ordered a mustard-bath, and counter-irritation along the spine with mustard to be constantly kept up, a purge of calomel and rhubarb, and one grain of sulphate of quinia every hour. I also gave in this case carbonate of ammonia and whisky. The child fell into a comatose condition, and died quietly on March 30.

Case IV.—M. B., aged 12 years. I saw the case on March 27. The child was delirious; there were convulsions, high fever, constipation, excessive pain in the nape of the neck and limbs, and slight punctated spots about the size of a pin's head on the skin; the eyes were congested; the tongue was coated white; the pulse 100. A blister was ordered to the nape of the neck, ice to the head, a purge of calomel and rhubarb, and two grains of sulphate of quinia every hour till

six doses were taken, then to lengthen the time to every three hours. Next day the delirium and convulsions had ceased; the nausea from which the child suffered a great deal was also allayed. The child had, during the night, a dark, offensive evacuation. The left eye was turned inward. Beef-tea and two grains of quinia were ordered every three hours. In two weeks the child was discharged, cured, with the exception of the left eye, which remained turned inward.

Case V.—R. M., aged 6 years; a very pretty and intelligent child; rather delicate; was taken with a chill on April 10, prostration, excessive nausea, but no vomiting; the tongue was coated white; the face and eyes were congested; there were high fever, pains in the back of the neck and lower part of the back of the head, and frontal headache. I saw the child about one hour after the attack came on, and found her restless, somewhat delirious, screaming on the slightest touch. She had spasms, but no true convulsions. The throat was painful, and there was some difficulty in swallowing, and constipation, but no petechiæ. I immediately ordered a blister to the nape of the neck, a purge of calomel and rhubarb, and one grain of sulphate of quinia every hour. I saw the patient the same night at nine o'clock: the blister had drawn well; the fever was not so high, and there was still slight delirium and restlessness. I ordered half a drachm of the oil of turpentine to be made into an emulsion, and to be injected into the bowels; two grains of sulphate of quinia every hour till four doses were taken, then the same quantity every three hours. The next morning the fever had almost disappeared, but the tongue was still coated very white. The patient was no longer delirious; she had had during the night an evacuation of light-colored matter. She was ordered beef-tea, eggs, and quinia (gr. ij) every three hours. The patient gradually improved, and in about one week was discharged, cured.

In looking over the records of the cases, what is most striking is the suddenness of the attack, bringing a strong and healthy child in a few minutes to the verge of the grave, with hardly any premonitory symptoms. In two of my cases the disease was followed by a simple feeling of lassitude. A symptom which was never absent—and which, according to Dr. North, is pathognomonic—was the condition of the throat. Another thing to be noticed was the absence of petechiæ in three cases.

In looking over the treatment, it will be found that counter-irritation along the spine, and quinia, were mainly relied upon. According to Dr. D. Gilbert and J. J. Levick, sulphate of quinia proved successful in their hands in the treatment of the disease. I can corroborate their statements. I found that to produce the good effects of the medicine it must not be employed with a sparing hand. The quicker your patient is under the influence of the medicine, the better. I have not found it to affect the head; on the contrary, the headache disappears under its use, and where, but a few hours before, delirium held sway, under the influence of sulphate of quinia tranquillity is restored. I used injections of oil of turpentine only in my last case, and their effects were most excellent, producing an evacuation in less than half an hour, and stimulating the patient.

THE TINCTURE OF EUCALYPTUS GLOBULUS AS A DRESSING FOR WOUNDS.—M. Demarquay, in the course of some experiments at the Maison Municipale de la Santé of Paris with the tincture of the leaves of this plant, which has a very agreeable odor, and is believed also to possess disinfecting, antiseptic, and healing properties, found that it often gave good results in cases in which the more usual remedies had failed. He adds that the tincture acted not merely by disinfecting and ameliorating the surface to which it was applied, but that its effect in removing the fetid odors which had rendered the patients unable to eat or sleep was still more beneficial. The sick-rooms, becoming impregnated with the aromatic odors peculiar to the leaves of the Eucalyptus, were entirely free from the odor of fetid emanations.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

CLINIC OF PROFESSOR AGNEW.

Reported by Dr. ELLIOTT RICHARDSON.

LITHOTOMY.

At the clinic held October 21, 1872, a man aged 27 years was presented, who had suffered since childhood from symptoms of stone in the bladder. The symptoms usually indicating the presence of vesical calculus—namely, a frequent desire to pass water, difficulty in commencing to do so, sudden stoppage of the stream, pain in the back, loins, and at the end of the penis, a sense of weight in the pelvis, with irritation of the rectum, and pain during defecation—were present in a marked degree in this case, and the patient, worn out by protracted suffering, was pale and emaciated. The lecturer said that, although these symptoms were usually associated with vesical calculus, they did not of themselves constitute a certain indication of this affection.

A positive diagnosis could be arrived at only by the use of the sound; and, in some cases, repeated attempts are necessary even with this instrument to detect the presence of the irritating body.

Urinary calculi have their origin usually in the formation of small concretions of uric acid in the pelvis of the kidney, which, passing into the bladder, form nuclei around which the triple phosphates, uric acid, and oxalate of lime accumulate in concentric layers, though sometimes a foreign body introduced through the urethra, or even a clot of blood, may form the nucleus of a stone. Though vesical calculi are usually composed of two or more of the constituents above enumerated, arranged in alternate layers, yet they may consist of but one of these, and where composed of oxalate of lime alone, constitute the "mulberry calculus," remarkable for its roughened surface and compact structure.

The presence of stone in the bladder is followed by changes in the mucous membrane of the latter, due to the mechanical irritation of the offending body. It becomes thickened, and discharges epithelial cells and mucus in greatly-increased quantities. These, undergoing decomposition in the urine, often render it ammoniacal, thus facilitating the precipitation of the triple phosphates and the consequent growth of the stone.

The Professor next alluded to the importance of a careful preparation of the patient for operation. If from a distance, a few days of quiet and rest should be allowed to elapse before any attempt at operation is made. The bowels should be gently evacuated by the use of a cathartic, and the urine should be examined and carefully tested. Diuretics should be given, and combined with an alkali when the urine has an acid reaction.

In preparing for the operation, a short table should be obtained, of a proper height, and covered with a mattress or folded coverlet. The necessary instruments should be provided, consisting of a sound, a scalpel of large size, a grooved staff to answer the purpose of a director for the knife after penetrating the neck of the bladder, one or two pairs of bladder-forceps, a scoop, and a syringe. A few ounces of dilute mucilage, either of slippery-elm or of flaxseed, carefully strained, should be provided. Means for checking hemorrhage should also be at hand, such as astringent solutions, lint, aneurism-needles, gum catheters, and ligatures. The operator should have five assistants,—one to administer ether, one to hold the staff, one to hand instruments, etc. as needed, and two to hold the limbs apart.

The necessary preparations having been made, the patient was brought into the room and placed upon the table. He had been in the ward for several days, and had been treated with cathartics and a preparation consisting of uva ursi, lupulin, and bicarbonate of soda. The urine had been examined and found to be free from any evidence of renal disease, and to have an alkaline reaction. A sound was introduced and the stone detected without difficulty.

The patient was then etherized, and a few ounces of mucilage were injected into the bladder. The hips were brought down to the edge of the table, the feet placed beside them, and the knees held forcibly apart.

The grooved staff was introduced and held firmly against the arch of the pubis, inclined a little to the right side.

The Professor then proceeded to perform the lateral operation for stone. An incision $1\frac{3}{4}$ inches to 2 inches in length was made in the perineum to the left of the median line, and the neck of the bladder reached and incised.

This incision was then enlarged with the finger, a pair of forceps introduced, and the stone removed with some difficulty, owing to its size and to the necessity of detaching it from the walls of the bladder, to which it had become adherent. It was very large, weighing while moist four ounces and six drachms, and was composed of uric acid and the triple phosphates.

After the operation, the bladder was washed out with cool water, and the patient carried into the wards. Twenty-five drops of the deodorized tincture of opium were given at once, and during the succeeding night forty drops.

October 25.—The patient has had some serious symptoms, which began the day succeeding the operation, and which were produced by an attack of vesical peritonitis. These symptoms were treated by the use of leeches, revulsives, and a liberal administration of opium; and under the use of these the condition of the patient has much improved.

There are now evidences of sloughing in the wound. The patient is taking a half-ounce of whisky every four hours. He is passing water through the wound freely.

Nov. 1.—The patient is now doing as well as can be expected. Pulse less frequent and of greater strength. Temperature also lower, and every other symptom favorable except a little sloughing of the wound.

Nov. 18.—Is now doing very well. The urine passes principally through the urethra, and the wound is filling up with granulations. The patient sits up in bed, and is desirous of getting up, but it is not thought prudent to allow him to do so.

Jan. 20, 1872.—The patient is to-day discharged from the ward in good health. He can retain his urine four hours at a time, but has a small opening in the wound, through which a few drops of urine pass during micturition only.

LUXATION OF HUMERUS.

The patient was a man 67 years of age, in rather feeble health. Three weeks ago he fell from a wagon, striking one shoulder, and producing a dislocation of the head of the humerus downward into the axilla. No treatment had been adopted in the case, and the arm was at this time somewhat swollen, and subject to feelings of numbness and cold, due to the pressure of the head of the humerus upon the nerves and blood-vessels in the axilla. The usual symptoms of luxation of the humerus were present in the case, and the head of the bone could be distinctly felt in its abnormal position. Prof. Agnew said the head of the humerus might be displaced downward, backward, or forward, but could not be displaced upward without fracture of the acromion process; although some writers assert that a subluxation in this direction occasionally occurs.

In accomplishing reduction, if the head of the bone be not in the axilla, it must first be brought there by manipulation, and then restored to its normal position by one of the several modes recommended. When the bone has been out of place so long as to contract adhesions to the surrounding structures, a rotary motion is necessary to detach it before efforts at reduction are made.

The patient was then etherized, when the adhesions were found to be very firm. They were, however, broken up, and the arm being held by the surgeon upward by the side of the head in a line parallel with the long axis of the body, according to the method of Mothe, reduction was accomplished without difficulty, the scapula being fixed by the foot of the operator placed upon the acromion.

Directions were given to retain the arm in a Velpeau bandage for two weeks, at the expiration of which period the patient may attempt the ordinary motions of the arm with safety. The joint will not regain entirely the freedom of motion of an uninjured joint, for the inflammatory roughening of the synovial surfaces never becomes entirely obliterated, and the damage sustained by the capsular ligament in consequence of its rupture and the passage of the head of the humerus through it renders it less capable of offering resistance to a subsequent dislocation.

TREATMENT OF TUBERCULAR LEPROSY.—At a recent meeting of the Clinical Society of London (*The British Medical Journal*, May 18), Dr. Tilbury Fox exhibited a patient eleven years of age, suffering from tubercular leprosy, in whom marked amelioration had been effected by the use of large and continued doses of quinia. The case was the fourth which Dr. Fox had treated recently in a similar manner, and in the other cases the improvement had been more marked. The child had a well-marked leonine expression of countenance, caused by thickening (from deposit of leprosy granulation-tissue in the skin) of various parts of the face. There was also brown discoloration of the entire surface, with a few anæsthetic spots, deposit of new tissue about the conjunctiva and the mucous membrane of the palate, etc. The general thickening or deposit in the integuments of the face and body had lessened; the voice was clearer; the snuffling resulting from deposit in the nasal mucous membrane had gone; and altogether the child had improved. The oil of cashew had been applied for the first time a few days before the day of the Society's meeting, in order that the Fellows might see its action. Dr. Fox stated that not only the oil of cashew, but carbolic acid and arsenious acid, used locally, dispersed the tubercular formations. But the oil of cashew in his hands had been very successful in this respect, though it required to be used with care.

THE MONOBROMIDE OF CAMPHOR.—Dr. William A. Hammond, in a note to the *New York Medical Journal* for May, calls attention to the therapeutic properties of this substance. He has used it in the treatment of the following conditions, and always with success: infantile convulsions, due to the irritation of teething; headache, occurring in women and young girls, and due to mental excitement and excessive study; and wakefulness. It also produced relief in a case of hysteria, occurring in a young married lady in the form of paroxysms of weeping and laughing, alternating with epileptiform and choreiform convulsions. He says it is apparently also indicated in delirium tremens, but he has not yet had an opportunity of trying it in that disease. It may be given in the form of pill with conserve of roses as an excipient, or as a mixture with mucilage of gum-arabic and syrup. The dose for adults ranges from two to five grains.

The monobromide of camphor consists of one equivalent of camphor united with one of bromine ($C_{10}H_{16}O, Br.$). It is a white crystalline solid, having the odor of camphor, and to a slight extent that of bromine. It decomposes readily when exposed to the atmosphere, to a heat of $100^{\circ} F.$, or to the action of ammonia.

NOCTURNAL ERECTIONS.—Dr. Polak describes (*Wiener Medizinische Presse*, May 19, 1872) a form of nocturnal erection which does not seem to be excited by lascivious dreams, which comes on a short time after the sufferer from it goes to bed, and which is not followed by an emission of semen. In some cases the erection occurs every night, and leaves, next morning, a good deal of sensitiveness of the testicles, so that life becomes a burden in consequence of it. In one case, after the usual remedies had failed, Dr. Polak directed that the patient should, before going to sleep, bandage his penis with a piece of flannel about an inch in width,—beginning to bandage at the root of the organ, and when the end was reached returning again to the root. The penis is then to be fastened to the thigh. This was found entirely to prevent the erections from taking place.

An interesting application of the constant galvanic current has been recently made by M. Lefort (*Gazette Médicale de Paris*, April 13) in a case of diabetes. He applied the positive pole to the back of the neck, and the negative pole to the hepatic region. The patient was in the habit of passing five or six quarts of highly-saccharine urine; but under the influence of the daily application of the constant current the quantity diminished to two quarts in twenty-four hours, and the proportion of sugar was about one-fourth of what it had been. The treatment, unfortunately, was interrupted at the end of a month, and nothing further is known of the history of the patient. Notwithstanding this, the amelioration of the symptoms produced by galvanism in this case affords ground for hope that it may have the power of curing diabetes.

PHILADELPHIA

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EDITORIAL.

THE UNIVERSITY HOSPITAL.

IT is well known to our readers that for a little more than a year past several gentlemen connected with the Medical Department of the University of Pennsylvania have been making strenuous efforts to raise a sufficient sum of money to enable the trustees of the institution to erect in the immediate vicinity of the new buildings of the Department of Arts, in West Philadelphia, a hospital which would be under the immediate control of the trustees, and which would afford the best clinical advantages to the students of the medical department. Recent events seem to indicate that their efforts will be crowned with success. The Legislature of the State, during its recent session, made a grant to the trustees of the University of \$100,000 towards this object, provided that \$250,000 additional was obtained from other sources; and we are happy to hear that \$190,000 of this has already been subscribed. More recently the Councils of this city have conveyed to the trustees of the University, for the nominal sum of \$500, "all that certain tract or piece of land situate in the Twenty-seventh Ward, bounded on the north by the middle line of Spruce Street, on the east by that of Thirty-fourth Street, on the south by that of Pine Street, and on the west by that of Thirty-sixth Street, containing five and a half acres, more or less," on the following conditions: first, that the said tract of land shall be forever held by them for the purpose of erecting thereon and maintaining a building or buildings to be devoted to general hospital purposes; second, that they shall erect and complete the said building within five years from the first day of July, 1872; third, that they shall set apart and forever maintain in the hospital at no time less than fifty free beds for the use of the poor of the city requiring hospital treatment; fourth, that they shall report to Councils, in the month of January succeeding the erection and completion of the hospital, and annually thereafter, the number of free beds maintained, together with such other information as may be desired by Councils. In the event of the failure of the trustees to comply with these very liberal terms, or on the attempt on their part to sell or alienate the land or a portion of it, the land, with the buildings upon it, shall revert to and again become the property of the city of Philadelphia.

At a meeting of the alumni of the Medical Department of the University, which was held during the recent session of the American Medical Association in this city, it was unanimously resolved that a special fund should be raised for the endowment of an Alumni Ward in the proposed hospital. It is desirable that this ward should contain not less than ten beds; and, as the endowment of each bed costs at least \$5000, a fund of \$50,000 must be raised before this object can be accomplished. The amount so far subscribed for this purpose is between \$5000 and \$6000; but we are glad to hear that contributions are rapidly coming in.*

The plans of the hospital, it is said, are being matured, and it is confidently expected that the ground will be broken during the present summer.

The work of bringing about this very desirable result has mainly fallen upon several of the younger members of the profession who are attached to the school as lecturers; and we think it augurs well for the future of medical teaching in Philadelphia that the young men connected with both the schools of medicine in this city are so fully alive to the necessity of clinical instruction forming an integral part of the course. We believe that a movement is on foot to enlarge the hospital accommodations already attached to the Jefferson Medical School; and, from the known energy which characterizes the faculty of that institution, we think it will not be long before she emulates the example of her elder sister. With the University and Presbyterian Hospitals completed, Philadelphia will be better provided with hospital accommodations than many cities having a greater number of inhabitants; for although the number of beds is less here than in New York, both absolutely and relatively to the population, there are fewer demands for relief of this kind in a city like Philadelphia, where every mechanic and even laborer is comfortably housed, and where the necessities of life are within the means of every workman.

AN EXAMPLE WORTHY OF IMITATION.

A MOVEMENT has just been set on foot in Berlin the object of which is to afford shelter and assistance to persons who are unfortunate enough to meet with accidents after nightfall, until they can be removed either to their own homes or to a hospital. At present there are only two stations, which are distinguished during the night by an illuminated red cross. Six physicians and three experienced nurses are attached to each station, two of the former and one of the latter going on duty every evening after ten o'clock. They are provided with all the medicines and instruments likely to be needed in an emergency.

In New York, the Governors of the New York Hospital, which was demolished a few years ago to make room for stores, have determined to devote a portion

* Alumni of the Medical Department of the University of Pennsylvania who feel disposed to contribute to this object should send their contributions to Dr. William Pepper, Chairman of the Hospital Committee.

of the revenues of the institution to a very similar object. The removal of the hospital has left a very crowded part of the city entirely unprovided with hospital accommodations, and those who by a sudden injury or acute illness may stand in need of them must now, frequently, be transported some miles to the Bellevue or some other up-town hospital. A house is to be taken in some accessible portion of the city, where patients can be temporarily cared for.

In this city, whenever an accident occurs it is the custom to summon to the aid of the sufferer the nearest physician, whose services are almost always unrequited, although often rendered at great inconvenience, and sometimes, in consequence of the demand made upon his time, at a pecuniary loss. It would of course be impossible to organize a public medical service which would be so efficient as to render it unnecessary ever to call upon private physicians, and there are occasions in which they would always cheerfully give their aid; but it does seem to us that the disastrous consequences of accidents might sometimes be averted if every station-house were fitted up as a temporary hospital, and if in every ward of the city there were one or two physicians whose duty it should be to respond at once to the call of the police.

THE MEDICAL AND SURGICAL HISTORY OF THE WAR.

THE Miscellany in our last number contained the request of Surgeon-General J. K. Barnes for permission to print the two remaining parts of the Medical and Surgical History of the War. The amount of money required to do this is small in comparison with the good which would accrue to medical science from their publication, and we sincerely hope that Congress may grant the necessary appropriation. Much time and money have already been spent in the collection and preparation of materials for the work, and it would be a false economy which would prevent its completion.

CORRESPONDENCE.

OPHTHALMOLOGY ABROAD.

LETTER FROM DR. A. D. HALL.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

DEAR SIR,—In my last communication about the Royal London Ophthalmic Hospital, I spoke more particularly of Messrs. Bowman and Critchett. Although they are probably the "lions" of the hospital, and are better known abroad than their colleagues, there are other eminent men and able operators on the hospital staff. Mr. Jonathan Hutchinson made an extremely favorable impression upon me. How he does so much work in such different specialties, and does it so well, was to me a subject of wonder. Besides his appointment at Moorfields, he is surgeon to the London Hospital, a large and busy house in Whitechapel, and to a hospital for skin-diseases.

To those familiar with medical literature, it is only neces-

sary to refer to his various papers as distinguished by rare powers of close observation. The "notched teeth" of Hutchinson are probably familiar to many a practitioner who does not know of him as an ophthalmologist. In a conversation with him upon the external characteristics of inherited syphilis, he referred to a peculiar appearance of the temples in these cases. It consists of a furrow or excavation in the space between the zygomatic arch and the superciliary ridge of the orbit. It certainly was well borne out by a number of cases seen on that special occasion. He referred to the great frequency with which hereditary syphilis was seen at the hospital.

Mr. Streatfield impressed me as being a remarkably adroit operator. In extraction of cataract he uses a method of incision peculiar to himself. It consists of the following procedure: Introducing a Beers' knife almost perpendicularly into the cornea at its sclerotic junction, he skirts along the edge of the anterior chamber until he has made a sufficient opening for the escape of the lens. The after-steps of the operation do not differ from those in common use. He prefers the Beers' knife for iridectomy, or for any operation to open the cornea. He does not like the keratome; his objection to it is that it is essentially a blunt instrument, that has to be forced into the cornea. He certainly operates very delicately and well, strange as his manner of using the knife may appear to those unaccustomed to it.

In going around his wards with Mr. Hulke, I was shown a case of rodent ulcer, situated at the left inner canthus in an old man. He had extirpated the disease as thoroughly as possible with the knife, and had then applied chloride of zinc paste. He expressed himself as well pleased with this mode of dealing with such cases. During a late visit to the Mater-Misericordiae Hospital in Dublin, he had seen quite a number of such cases, where they were looked upon as intractable, and nothing was attempted to be done for them. A case was shown in which a melanotic tumor was removed by the knife and caustic from the left orbit of an old woman, and from which even the bony walls of the orbit had come away with the slough, so that the ethmoid cells and base of the brain were exposed. The usual run of cases of conjunctivitis and iritis was to be seen among the out-patients. One case was of interest; it was a dislocation of the lens downwards, with tilting forward of its superior edge. In the opposite eye there was partial closure of the pupil, with posterior synechiae. On inquiry, I learned that quite a number of cases of optic neuritis were met with, and that many of them occurred in young women from menstrual difficulties, and in older women from uterine diseases. Retinal apoplexy was thought in some cases to be a kind of vicarious menstruation.

Fatty degeneration of the effused blood-clots had not unfrequently been seen.

The ophthalmoscope room excited my liveliest admiration. It was large and roomy, with blackened walls, and had nearly if not quite a dozen stalls, each one provided with an Argand burner; thus permitting a number of cases to be examined at the same time. So far as its appointments went, it was superior to anything I saw in London or Vienna.

I assisted Mr. Wordsworth in the enucleation of the right globe of a young woman, for internal suppuration. A curious fact in the history of the case was that there was protrusion of the fellow-eye in connection with thyroid hypertrophy. Going around the wards with Mr. W., I saw a case of upward flap-

extraction by Mr. Bowman, in which there had been some prolapse of the iris, forming a cystoid cicatrix. The result of one of Mr. Critchett's new operations was shown with a good circular pupil. The operation I have previously described. It differs from Liebreich's simply in the location of the wound. There was also shown to me a case of divergent strabismus of the left eye, in which the external rectus had been divided and the internal rectus advanced and stitched to the cornea. Up to that time the operation had been a success. In another case one of the surgeons had cast a ligature from the external rectus, or rather its stump, and made it fast in the skin of the nose. I was informed that in some cases of obstinate double divergent strabismus a ligature had been thrown from the end of one rectus externus to the extremity of the other across the bridge of the nose. In speaking of the rarity with which herpes zoster ophthalmicus was seen with us, Mr. Wordsworth remarked that it was not commonly met with in London. He mentioned as an instance of this surprising occasional rarity of diseases in certain localities, that Pagenstecher, of Wiesbaden, and Hasner, of Prague, until a recent visit to London had never seen a specimen of molluscum, and took back with them preparations of the disease. Mr. Wordsworth showed a case of zonular cataract in a young lad. It was proposed to do an iridectomy to allow the light to pass the periphery of the lens. He operated very beautifully with two needles to break up a capsular opacity remaining after a Graefian extraction. On this occasion there was shown an interesting case of complete paralysis of the left third nerve in a young man, the result of syphilis.

Mr. Bowman and Mr. Critchett are entirely different in personal appearance.

Mr. Bowman is a slender, scholarly-looking man, with a quiet gentle face, and of medium height, apparently about sixty years of age. His hair is quite gray. Wearing no beard, and dressing in black, he presents a very professional appearance. His manner, though very quiet, is extremely kind and agreeable, especially so in his own house. In many little ways he showed a mind eager to acquire information, especially in matters relating to our own country. My recollections will always be agreeable of the hospitality and courtesy of Mr. Bowman and his family in their own home. I had many conversations with him as to the status and position of the profession in England. On mentioning to him the fact that a leading English medical journal had expressed great satisfaction at the marriage of a sister of the Marquis of Westminster to an English medical man, as indicative of a social rise in the position of the profession, he remarked that he did not think that the impression was correct; that the leading medical men of London had a certain position of their own, which the mass of the profession had not. In the case of the marriage referred to, the lady, not very young, had married Dr. Frank (a very handsome and agreeable man of society), formerly of the army, but now practising in Pau. It was generally believed in London, moreover, that the lady's family were not pleased with the alliance. Sir Thomas Watson is a near neighbor and friend of Mr. B.'s, and it was very interesting to me to hear anecdotes and sketchy descriptions of this well-known man. Quite lately he poured forth a flood of mimic indignation at the arrest of an able-bodied street-crossing sweeper. He lives with an unmarried daughter in Henrietta Street, and, spending much of his time at the window looking at the busy scene without, one morning he missed his sweeper from his

accustomed post opposite his window; and, inquiring of his servant, he found that the police had appropriated his friend as a vagrant. Hence his complaint. The interest which every American medical man takes, or ought to take, in Sir Thomas, is my only excuse for introducing this little anecdote.

Mr. Critchett in personal appearance is just the opposite of Mr. Bowman. He partakes more of the *fortiter in re*. He is not, however, the rather coarse-looking man that many of his photographs represent him. He is quite a large, well-made man, bald, with a fringe of dark hair, dark side-whiskers; having a quick dark eye, a bright mobile face, with a very frequent humorous expression. If one might be permitted to use it, "jolly" would be the word most expressive of his manner. Among the operations of Mr. Critchett's which I witnessed, was one of a suction-operation upon a young girl in whom a soft cataract had been operated upon a few days before, and in whom, as a consequence, the anterior chamber was filled with lenticular matter. With a broad needle a small opening was made, and Bowman's suction-syringe was used. The only point worthy of notice was that the syringe was half filled with water, to prevent too sudden an evacuation of the anterior chamber and prolapse of the iris. He does the subcutaneous operation for strabismus, as in fact do all the Moorfield surgeons. With a pair of straight scissors he makes the wound below the insertion of the tendon, slides up the hook, engages the tendon, and divides it subcutaneously. He operates boldly and beautifully.

Mr. Bowman seemed to be impressed by Dr. Williams' (of Boston) suture of the cornea after flap-extraction. He asked me if I had seen any of the cases. One case I mentioned as having seen in Boston last summer, in which, after a double extraction with suture, after several days it was not easy to distinguish the line of cicatrix. Mr. Critchett thought that the suture might do well enough for traumatic injuries, but not after cataract-extraction. I mentioned a case formerly under my care, in which there was a wound extending throughout the vertical meridian of the cornea, and in which the aqueous humor drained off as fast as secreted, the iris prolapsed through the wound, and no form of compress or bandage would obviate this condition. A fine suture of one strand of sewing-silk through the centre of the corneal wound brought the edges into close apposition; the wound quickly healed without apparent irritation from the presence of the suture. In a case of injury of the eye in which the corneal wound gaped and was very slow in uniting, Mr. Bowman passed a suture through the edge of the cornea, did an iridectomy, and forcibly pulled away the anterior synechiæ which were present. This operation was followed by a double iridectomy upwards for acute glaucoma, in an old, thin, badly-nourished man, in whom the attack came on during acute bronchitis. Another double iridectomy was done in a case of chronic glaucoma; the left eye was amblyopic, in the right eye there was diminution of the inner field of vision. Mr. Bowman mentioned a case in which acute double glaucoma came on in a lady who had just undergone excision of the breast. The breast was in a sloughing condition; yet this had no ill effect upon the operation for glaucoma, and it did well. In following Mr. Bowman's practice, I observed that he resorted very freely to the use of the artificial leech.

During the winter, Mr. John Couper, one of the surgeons, gives a course of ophthalmoscopic demonstrations at four o'clock in the afternoon, followed by a lecture at five o'clock.

On the first occasion of my visit to one of them I found about fifteen or twenty gentlemen present. The majority of them appeared to be graduates; among them were Indian physicians and several army surgeons. Mr. Couper examined a case, announced his diagnosis, and then the students followed. All seemed to be familiar with the use of the instrument. The stalls were filled with patients, and the gentlemen waited their turn to examine the different cases. I saw an unusual appearance of atrophy of the choroid in a girl eight years old, apparently resulting from an effused blood-clot; accompanying this was a blue atrophy of the optic nerve. In the next stall a case of locomotor ataxia furnished a white atrophy of the nerve. There were many other cases, but, owing to the shortness of the time and the long sittings of many of the gentlemen, I did not have an opportunity to examine all so thoroughly as I wished to do. After an hour spent in this manner, Mr. Couper, followed by the class, went into an adjoining room used as a lecture-room, and delivered a lecture upon the normal and abnormal appearances presented by the optic nerve: explaining the conditions of ascending and descending neuritis, of optic nerve atrophy, demonstrating upon the blackboard the condition of the papilla known as the "choked disk." Liebreich's Atlas was constantly used in illustration of the appearances spoken of.

Mr. Couper described his method of diagnosing mixed astigmatism quickly by the ophthalmoscopic mirror alone, an inverted or an erect image becoming alternately visible, according as the observer views the fundus through the meridian of the greatest or of the least curvature. He uses a concave mirror of thirty inches focus, and begins the examination at a distance of five feet. The meridians of maximum and minimum curvature are sometimes clearly revealed by the distortion which the image undergoes when viewed from a distance. It is best to have the accommodation paralyzed by atropia, and the surgeon should then recede to a sufficient distance to make sure of gaining an inverted image; and next direct the patient to follow, with the eye under observation, gentle movements of the forefinger in a horizontal and a vertical direction, and then notice in which direction and at what distance he gains the inverted or the erect image. To prove this, Mr. Warren Tay worked out a number of cases by the usual methods, purposely reserving his results; and then Mr. Couper, in the same cases, came very near the same quantities by the method described, in much less time.

This was quite an object, as, among such patients as attended the hospital, it was often a most difficult matter to get correct answers.

Mr. Streatfield told me that he had recently seen several cases of anæsthesia of the fifth pair of nerves, followed by entire insensibility of the cornea, but that it was rare. On the other hand, he very seldom saw cases of pterygium. This seemed to me very strange, in a great port like London, where so many sailors (a class peculiarly liable to this affection) are constantly gathered together. Inquiring of Mr. Wordsworth whether the hospital charities were not much abused by patients who were well able to pay fees, he related a curious circumstance that had recently come under his notice. A woman had been prescribed for on one of his days of attendance, who in some way excited his suspicion as to her fitness to receive gratuitous advice. The hospital porter was directed to observe her particularly; and one day, to his astonishment, he saw her enter an elegantly-appointed carriage which stood

just around the corner from the hospital, and drive off, after giving her orders to the coachman upon the box with all the air of evident proprietorship.

(To be continued.)

ON THE PREVENTION OF PITTING IN VARIOLA.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

DEAR SIR,—To prevent the pitting in variola has been a subject that has engaged the attention of the profession for years. Rob smallpox of this, and, in the eyes of the public at least, one of its worst features is destroyed. I wish to call attention to a preparation that I have used in several cases of confluent variola with great success. It consists in the *carbonate of lead*, the ordinary white-lead of the paint-shops,—recommended by Professor Gross, and so successfully used in the treatment of burns. My mode of using it is to add to the paint a sufficient quantity of linseed-oil to make it of the consistence of rich cream, and then, by means of a camel-hair pencil, apply it to the face. I have done this in the vesicular stage of the eruption, but perhaps it might be well to use it even earlier,—in the papular stage. A few applications form a complete covering to the face, at once excluding all possible access of air or light. It is soothing to the parts, allaying irritation, and quieting the inflammation, and in those cases where I have used it has been effectual in preventing the pitting. It commends itself from its easy mode of application, its cheapness, the readiness with which it is obtained, and from the facts that it disposes of the dark room so religiously observed by many practitioners, and that a few applications render all future interference unnecessary.

While upon the subject of smallpox, I will add that for the delirium of this disease, which at times amounts to violence, and is annoying to the friends of the patient and physician, I have found the bromide of calcium of signal benefit. I presume all of the bromides would be equally serviceable, but that of calcium, containing a larger per cent. of bromine, is more decided in its action.

I offer these suggestions in the hope that they may prove of service to the profession.

I remain

Very truly yours,

ALONZO L. LEACH.

2118 SPRUCE STREET.

COLD FOOD FOR INFANTS.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

DEAR SIR,—The difficulty of rearing infants on artificial food, when neither mother's milk nor a wet-nurse can be procured, seems to justify me in publishing the following remarks:

Under the above circumstances, of course, we have nearly always to use cow's milk and the common feeding-bottle. Our best authorities direct that the milk should be given to the child at the same temperature as that of the mother's milk,—from 90° to 95° Fahrenheit,—and, where great accuracy is required, a thermometer employed. On reflection, it is obvious that these instructions can never be carried out so that the little one will take all its food at the same temperature; for during a meal the bottle becomes cold, and there

may frequently be considerable difference of temperature between the first and last milk imbibed by the infant. It is unnecessary to state that very little will upset the feeble powers of the digestive organs in the early days of infantile life; and this difference in the temperature of the food, I am disposed to believe, is one of the causes of gastric and intestinal disorder which we so often have to deal with among infants brought up by hand.

Instead of giving warm milk, I have adopted the plan of giving cold milk entirely,—ordering the babe's bottle to be kept standing in iced water in summer and in a cold place in winter. This method I have found, from practical experience, to answer remarkably well. If there is any tendency to diarrhoea, I recommend the milk to be heated to 212° F., and afterwards allowed to get quite cold before being used. In private practice, I am of opinion that bottle-fed infants generally have their food given them too warm.

It would lead me far beyond the limits of a letter to enter into details regarding the administration of cold food to infants. I might, however, add that they soon like it even better than warm food, and during the teething period the cold milk seems especially agreeable to the inflamed gums of the little sufferers.

Very respectfully yours,

J. H. T. KING, U.S.A., *Post Surgeon*.

FORT RANSOM, D.T., April 10, 1872.

OBITUARY.

DR. WILLIAM W. GERHARD.—We have recently had occasion to refer to the great loss sustained by the profession in the death of Drs. Samuel Henry Dickson and Samuel Jackson; and it now becomes our duty to notice the loss of another prominent teacher, writer, and practitioner. Dr. Gerhard, who died on the 28th of April last, was born in this city, July 23, 1809. He was of pure Moravian descent, and was the son of William Gerhard, Esq., a well-known citizen. He entered Dickinson College, Carlisle, in 1823, and graduated with distinction in 1826. He became soon afterwards a pupil of the late Dr. Parrish, with whom Dr. George B. Wood was also associated as an assistant in the instruction of medical students. He entered upon the Almshouse medical service as a resident student in 1828; and here an excellent field was offered him for the experiments on which he founded his inaugural thesis on "Endermic Applications," presented by him to the faculty of the University of Pennsylvania previous to his graduation in the spring of 1830, and during the same year published in the *North American Medical and Surgical Journal*. The important conclusions deduced by Dr. Gerhard were considered of sufficient consequence to be quoted in other contemporaneous medical journals. These investigations fully confirmed those of Lembert, to whom belongs the honor of the therapeutical application of this mode of treatment, though not, perhaps the undisputed credit of the discovery.

He was, immediately after graduation, elected resident physician at the Almshouse, and, on the expiration of his clinical service here in 1830, visited Europe, where he closely devoted himself to the study of disease,—more particularly under the guidance of the distinguished Louis, at La Pitié. That he made excellent use of the abundant opportunities offered him in Paris is amply evinced, not only by his numerous contributions during his residence there to the *American Journal of the Medical Sciences* on a great variety of interesting topics, but also by the fact that, even after his return home, the same periodical for several years received few more valuable papers than those emanating from Dr. Gerhard's busy pen, summing up his medical experience in the French capital. An epidemic of cholera in 1830 found him pursuing

his medical studies in that city, and gave himself and Dr. C. W. Pennock material for the preparation, in Paris, of a very interesting series of observations on that disease, which were published in the journal just referred to (vol. x., 1830, pages 319-390). They modestly state that "the American physicians who remained at Paris did not aspire to the honor of representing their profession; belonging to the youngest classes of it, they could pretend to nothing more than their own instruction, and would only be useful as the interpreters of the Parisian pathologists." The condensed account they thus gave of the epidemic was based upon cases observed in the wards and amphitheatres of such men as Andral and Louis,—at La Pitié especially, but also in the Hôtel-Dieu, and Val-de-Grace. During 1833 also appeared in the same journal contributions by Dr. Gerhard on "Fatal Cases of Smallpox and Rubeola," "Cerebral Affections of Children," and "Pneumonia of Children," all of which were founded on observations made in the Hôpital des Enfants Malades of Paris. These sketches of his experience in the Paris hospitals were complete records of cases in all their details, and were perfect pictures of actual illustrations of diseases carefully studied and intelligently appreciated.

On his return home, in 1834, he was appointed resident physician to the Pennsylvania Hospital, and while serving in this capacity he was, in 1835, elected one of the physicians of the Philadelphia Hospital (Almshouse). In both of these institutions he found time to prepare for publication a very full and valuable series of clinical reports and observations, embracing a hundred or more pages of the *American Journal*, and invading various departments of pathology, especially fevers and affections of the lungs. The most important researches made by him were those published in the same journal in 1837, "On the Typhus Fever which occurred in Philadelphia in the Spring and Summer of 1836, illustrated by Clinical Observations at the Philadelphia Hospital; showing the distinction between this form of disease and Dohin-enteritis, or the Typhoid Fever with Alteration of the Follicles of the Small Intestine." These were especially valuable as establishing the differential diagnosis between typhoid, typhus, and remittent fevers. In 1845 he was appointed physician to the Pennsylvania Hospital,—a position he continued to occupy until his resignation, in 1868. In 1838 he instituted, with Drs. John B. Biddle and Meredith Clymer, the *Medical Examiner*, in which enterprise he was materially assisted by the Pathological Society,—a new organization, of which he was President, and which continued in active existence for several years. In 1836 he published a work "On the Diagnosis of Diseases of the Chest, based on a Comparison of their Physical and General Signs;" also, in 1842, "Lectures on the Diagnosis, Pathology, and Treatment of Diseases of the Chest," which originally appeared in the *Examiner* in 1840.

In 1838 he was appointed an assistant to Dr. Jackson at the University of Pennsylvania,—more particularly for the purpose of conducting clinical instruction at the Almshouse, and of relieving the latter. Here he devoted himself especially to the diagnosis and pathology of diseases of the chest. His services were so highly appreciated by his class, that in 1840 complimentary resolutions were passed by the medical students on attendance at his clinics. "In 1841 the system of dispensary clinics was adopted by the University. The first that was instituted under its auspices was conducted by Dr. Gerhard and Dr. William P. Johnston, in the building of the Medical Institute, in Locust street above Eleventh. It was there carried on until the commencement of the course of 1843, when it was transferred to the University building, under the immediate superintendence of the professors, with the assistance of those gentlemen."*

He was appointed Teacher of Clinical Medicine in the Medical Institute in 1844, with Drs. P. B. Goddard, W. P. Johnston, Joseph Carson, Caspar Morris, M. P. Hutchinson, and James B. Rogers, as his colleagues; but his failing health prevented him from delivering the lectures of the course; and during the next year the Institute ceased to exist,—the Franklin Medical College succeeding it in the occupancy of its building.

* History of the Medical Department of the University of Pennsylvania, by Joseph Carson, M.D. Philadelphia, 1869.

During his connection with the *Medical Examiner*,—which lasted from 1838 to 1844, in which latter year he visited Europe on account of ill health,—he made numerous and voluminous contributions to its columns on every variety of subject in pathology; but from this time—probably on account of his impaired physical condition and the demands of an increasing practice—his pen grew less active, and only occasional papers appeared from him.

In 1847 he was appointed Assistant Lecturer on Demonstrative Medicine in the University of Pennsylvania, which position he occupied until 1856.

Dr. Gerhard will long be remembered for his valuable aid in the advancement of his profession,—as a clinical teacher especially. As a lecturer he kept himself thoroughly up to the pathology of his day of active service, and was one of the most intelligent followers of the Louis school we have ever had. He was clear, methodical, and eminently successful before a class, on account of the extraordinary pains he took to make every detail of a case—its pathology, treatment, etc.—apparent to the mind of the student. He was simple in his mode of expression, never attempting anything like ornament or pure rhetoric. His delineations of cases were graphic pictures, complete in all their parts.

The first inroad upon his health had been made by an attack of typhoid fever, resulting from close application to the study of that disease, and continuous exposure to the poisoned atmosphere of the Almshouse. For many years past his health had been bad, requiring his gradual withdrawal from the labors of practice. In addition to the protracted cerebral affection which was the immediate cause of his death, he a year or two since suffered from an attack of pneumonia,—following after a serious fracture of the fibula,—from which he narrowly escaped a fatal result.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, APRIL 25, 1872.

VICE-PRESIDENT Dr. J. H. BRINTON in the chair.

DR. F. H. GROSS presented a specimen of *cancer of the head of the pancreas*, and read the following history: "My acquaintance with the deceased, J. F., a grocer, born in Germany, and aged 48 years, dates from August 30, 1870 (twenty months), when he made application for life-insurance, and was presented to me for medical examination. From my notes, taken at the time, I find that he was then 46 years of age, weighed 150 pounds, was about five feet seven and a half inches in height; measuring around the chest on forced expiration thirty-five inches, and on forced inspiration thirty-eight inches. When standing, his pulse was eighty-four per minute, and when sitting, seventy-nine. The physical exploration of the person of the applicant, and the verbal answers to questions usual at such times, elicited nothing to make the risk an objectionable one to the insurance company, and it was consequently accepted.

"I did not see him again until in the early part of the present year, about sixteen months after the examination above alluded to, when he informed me that he had been for a short time under a physician's treatment for dyspepsia. To a cursory view he presented at that time no particular signs of disease. On the 20th of February following he called for the first time at my office to consult me in regard to his disease.

"He had lost flesh, complained of want of appetite, constipation, occasional nausea, some pain in the epigastrium, and also of occasional distressing eructations and vomiting after meals. He continued to call at my office about once a week until the end of March, getting only temporary relief from the more distressing symptoms. He soon became so weak and emaciated as to be unable to leave his room. Hiccough and vomiting continued to increase in frequency and severity,—the stomach rejecting almost everything that could be offered.

He frequently threw off large quantities of more or less clear watery fluid. There never was any vomiting of blood, nor of anything that had the appearance of purulent matter. The fluids ejected by the stomach were not sour, and only after long-continued emesis were they said by the patient to be bitter. When emaciation had become extreme, a hard substance could be obscurely felt to the right of the epigastrium. Suspicions of the existence of cancerous disease were expressed to the friends of the patient. After a consultation with Dr. Tiedemann, it was firmly believed that such was the character of the disease. The pancreas was mentioned as the probable seat of the trouble, but no positive diagnosis as to locality can be said to have been made. The patient was now rapidly sinking from distress and exhaustion; vomiting and singultus were almost continuous. The bowels, which had previously been obstinately constipated, became quite loose, and the discharges involuntary. In this condition he gradually sank, and died on the 11th of April.

"In presenting the specimen,—which consists of the head of the pancreas and portions of the stomach and duodenum attached, and obtained twenty-four hours after death,—I regret that I am not able to exhibit the entire stomach and pancreas. The autopsy was strongly objected to, and after much persuasion on my part only a very limited examination was allowed; and this is all I was able to bring away.

"On opening the abdominal cavity, the hardened mass attached firmly to the pyloric portion of the stomach and to the duodenum was at once apparent. The stomach, which was not of unusual size, was opened in situ. It contained a small quantity of dark brownish-green fluid. The pyloric orifice was so contracted, and the tissues around it so hardened, that it required some force to engage the end of the little finger in it. The indurated mass, as seen in the specimen, extends nearly or quite around this portion of the stomach.

"A cursory examination by the microscope leaves no doubt as to the character of the disease.

"The liver, so far as could be ascertained under the circumstances, was in a healthy condition."

DR. F. H. GROSS also presented a specimen of *cystic disease of the testis, removed from an infant five and a half months old*.

"The case was brought to the dispensary of St. Mary's Hospital about a month ago. On examination, it was found that the left testicle was enlarged to nearly the size of a pullet's egg; hard, yet elastic to the touch, and would bear considerable pressure without giving pain. The mother said that when the child was about six weeks of age she first noticed that one testicle was slightly larger than the other, and considerably harder, describing it as 'feeling like a marble,' and that it continued steadily to grow until it reached the size above mentioned. The lymphatic glands of the groin were not involved, nor was there any history of syphilis or tubercle. On introducing the exploring-needle, a small drop of clear liquid oozed from the puncture. Not feeling entirely satisfied as to the character of the disease, Dr. Keen was requested to examine the case, and was very decided in pronouncing it cystic sarcoma.

"Five days ago the child was etherized, and, with the assistance of Dr. Keen and the residents at the hospital, I removed the testicle in the usual way; but, to control hemorrhage from the spermatic artery, acupressure was employed above the surgical wound, by passing a pin underneath the cord, and looping a thin wire moderately tightly over its two ends. When the cord was divided, there was no bleeding whatever, nor did it retract beyond the pin. Water-dressing was applied to the wound. On returning to my office in the evening, over six hours after the operation, I found that a message had been left about two hours previously from Dr. Nelson, the resident at the hospital, who had charge of the case, desiring me to come immediately, as the child was bleeding. On my arrival at the hospital, I found that hemorrhage had commenced about four hours after the operation, but had ceased without serious result to the patient. The loss of blood, however, was considerable for so young a subject, having soaked through the diaper and clothing of the child on to the dress of the mother, who was holding the child in her lap before the bleeding was discovered. To guard against a recurrence, an additional loop was more tightly applied over the ends of the pin. The

hemorrhage was unexpected, but had it been promptly detected it could have been easily controlled in this way.

"The specimen, which has been divided through the middle, is seen to contain innumerable cysts, varying in size from that of a pin's head to that of a large pea, or larger, most of them filled with a clear, jelly-like fluid, with here and there one containing a brownish substance.

"I intended to call special attention to several hard, bony points that were felt when the specimen was first cut through, but after several days' maceration I do not now feel them."

Dr. T. H. BACHE presented for Dr. R. E. BROWN, of Mt. Holly, N. J., a specimen of *osteosarcoma of the head of the left tibia*, removed from

"I. M. S., a male, aged 67 years, plethoric, and very heavy, habits strictly temperate, always observing the utmost care in his mode of living, and general health very good up to the time of his last illness (one month). About ten years ago, as he was proceeding to his place of business, while in the act of getting off a street-car, he slipped or made a misstep in such a manner as to strain or cause a twist of the *left knee-joint*, which at first caused some pain and uneasiness, but not sufficient to prevent him from walking and attending to his business, which he did for several days after; then, however, the joint becoming gradually stiffened, followed by slight redness, swelling, and pain, prevented him from attending to any further business. The swelling very gradually increased, so that at about six weeks from the date of the supposed cause of the injury it had grown to the size of a small hen's-egg, and was situated directly over the joint, near the inner condyle. The pain at times would be annoying, but never so severe as to require large doses of anodyne for its relief; the redness gradually disappeared, and the limb assumed its natural color. The tumor which was now formed, and of a non-indurated character, increased very slowly in size up to the time of his death, when it measured thirty-two inches in circumference. In the latter part of the patient's life the tumor became hard and nodulated in different portions, but his health remained remarkably good up to within about six weeks of his death, when he was attacked with loss of muscular power, principally on the right side, which left him in a very feeble condition; and shortly after erysipelas commenced in the hands, face, and right thigh, when he rapidly died from prostration, refusing both medicines and food during the last week of his illness. He had had repeated attacks of erysipelas during the last twenty-five years, and both legs had chronic ulcers. To my knowledge there has never been any similar disease occurring in any member of his family."

Dr. GEORGE STRAWBRIDGE presented a specimen of an *eyeball diseased by attacks of irido-cyclitis, due to the lodgment of an iron splinter in its interior*:

"E. B., æt. 48, was wounded in the eye ten years since, by a splinter of iron striking the outer half of the cornea, passing through the iris and crystalline lens, and lodging in the sclerotic coat about one line distant from the entrance of the optic nerve. At the time of the accident, and for several weeks afterwards, considerable inflammatory action was present, but it finally entirely subsided, leaving the vision much impaired. Two years afterwards another attack came on, lasting three weeks, and then subsiding. After this there was an interval of eight years, during which time the patient suffered no inconvenience from the injured eye, although vision was almost entirely lost.

"Six weeks ago the third attack appeared, and at the time of my first visit I found a severe irido-cyclitis present, with a dense exudation-mass in the pupil, closely binding the iris to the crystalline-lens surface, and at the outer portion of the iris was to be seen a small slit made by the passage of the foreign body ten years before. Tension of eyeball slightly lessened. The eyeball was enucleated to preserve the sound eye, which already showed signs of sympathetic inflammation. On examination of the eyeball, the lens was found opaque, the vitreous humor fluid; marked changes were present in the iris and ciliary bodies, and finally the steel splinter was discovered impacted in the sclerotic coat, about one line inward from the entrance of the optic nerve. Directly around it the retina, choroid, and sclerotic were thickened, and by a microscopic examination probably other marked changes will be found. The long interval of eight years between the attacks of irido-cyclitis is an interesting feature of the case."

BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES.

MAY 6, 1872.

DIRECTOR W. S. W. RUSCHENBERGER, M.D., in the chair.

PRESENT, Messrs. J. Zentmayer, J. G. Hunt, I. Norris, McQuillen, Shaeffer, Nancrede, Vaux, Parker, F. W. Lewis, Buckingham, J. Truman, W. H. Trueman, Shoemaker, Warner, and Richardson.

Dr. RUSCHENBERGER, U.S.N., donated to the museum of the Section a specimen of hair from a chief in the Navigator Islands. It was cut by Dr. Ruschenberger, whilst on a cruise in the Pacific during the year 1856, from the head of the savage.

Mr. JOSEPH ZENTMAYER exhibited his newly-invented Erecting Prism, and, in his preliminary remarks upon the subject of apparatus hitherto employed for erecting the microscopic or telescopic image, observed that the great—almost insuperable—objection to these instruments, when composed of lenses, has been that they produce double images, or a distorted single image, and cause a lamentable loss of light. Some years since, Prof. Henry Morton called Mr. Zentmayer's attention to a statement of Sir David Brewster's, to the effect that a right-angled prism interposed between the lenses of a microscope or telescope acted as an erector in one direction, *i.e.* would rectify the image so that the right side corresponded to the right side of the object, or (if rotated 90°) so that the top of the image corresponded to the top of the object, although of course it failed to accomplish both these desiderata at the same time. On investigation, however, he (the speaker) had found that if a right-angled prism was employed, many of the rays of light were so insufficiently refracted as to be lost, and further research enabled him to determine that the proper angle for a prism of ground glass was only 27° 19', in which case there was no "cut-off," the whole depth of the prism being, under such circumstances, available.

Mr. Zentmayer stated that although most of the telescopes used for terrestrial objects were fitted with erecting eye-pieces composed of an extra pair of lenses, it was so rare for opticians to succeed in adjusting these perfectly enough to avoid serious distortion of the image as well as great losses of light, and likewise in flatness of field and accuracy of correction, that the best terrestrial telescopes, such as those used in our own Coast Survey and abroad, were fitted with astronomical or non-erecting eye-pieces, since the inversion of the image was found to be the lesser evil.

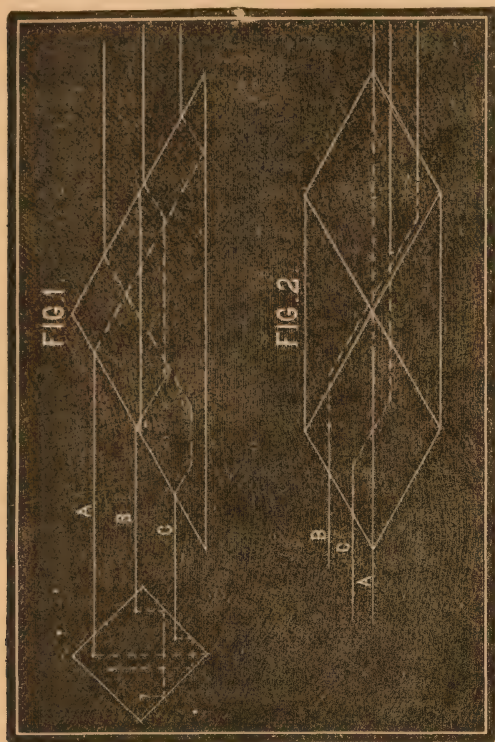
But, however unsatisfactory is the working of lenticular erectors in the telescope, their performance in the microscope is much more objectionable, and accurate adjustment correspondingly more difficult, so that their use is practically confined to dissecting microscopes of low power. In order to elude their disadvantages, Amici, many years since, contrived an erector composed of two right-angled prisms, as suggested by Brewster; but the arrangement has not proved efficient in practice. The erecting prism of Nachet is so adjusted that rays proceeding vertically from the object under examination are reflected along a tube at right angles to the body of the microscope, and reach the eye of the observer in a horizontal direction. It is inconvenient for use in dissection, because the hands, when at work, are not in the direction of the axis of the eye, and also because the microscopist must keep his eye so closely applied to the eye-glass of the eye-piece.

Mr. Zentmayer's new prism, which he exhibited in successful and eminently satisfactory operation at the meeting, has the great advantage over Amici's combination that singly it erects both in the vertical and lateral directions, without material injury to definition or serious loss of light. When in use, it is placed in the body of the microscope, immediately above the objective, and is stated to be equally applicable to each tube of the binocular instrument.

Fig. 1 shows a front and also a profile view of the prism, the projection of the former being a square, and that of the latter an isosceles triangle. The angles at the extremities of the base of this triangle are, as already mentioned, 27° 19' for crown glass of a refracting index of 1.53.

Fig. 2 is a bird's-eye view of the prism, in which the courses

of the same identical rays marked A, B, and C, respectively, are represented by dotted lines.



Careful examination of these figures will show how rays such as B, entering the right side of the prism's inferior surface (as adjusted in the microscope-tube), are reflected and refracted so as to emerge upon the left side of its superior



surface; and in like manner that rays such as A, which enter near its anterior angle, are so bent as to make their exit in the neighborhood of the upper and posterior angle, thus accomplishing both the vertical and horizontal erection of the image before it reaches the observer's eye.

Fig. 3 is a drawing of the prism in perspective.

Dr. J. G. HUNT exhibited a very convenient dissecting-microscope, whose value he thought had not yet been duly appreciated in Philadelphia, although it would now probably be superseded, in a measure, by the ordinary microscope as fitted with the erecting prism just described by Mr. Zentmayer. This form of the dissecting instrument, made by Messrs. R. & J. Beck, of London, was arranged for a binocular attachment, which could be readily adapted at a moderate expense.

ETIOLOGY OF ADDISON'S DISEASE.—Professor Tigri reports (*Gaz. Med. de Bahia*; from *L'Union Médicale*, May 21, 1872) a case of this disease in which, at the autopsy of the patient, the sympathetic was found to be diseased. The ganglia were considerably hypertrophied, especially the solar ganglion. The left cervical ganglion was larger than the right, and its neurilemma was hypertrophied.

REVIEWS AND BOOK NOTICES.

HISTORY OF MEDICINE FROM THE EARLIEST AGES TO THE COMMENCEMENT OF THE NINETEENTH CENTURY. By ROBLEY DUNGLISON, M.D., LL.D., late Professor of the Institutes of Medicine, etc. Edited by RICHARD J. DUNGLISON, M.D. Philadelphia, Lindsay & Blakiston, 1872. Pp. 287.

The most interesting feature associated with the publication of this volume is probably the insight it gives into an earlier period of its distinguished author's life, hitherto comparatively unknown to the great mass of the profession. We recall him as he was in his mature years,—the eloquent lecturer, the erudite author, the learned philologist, and the accomplished gentleman; but *these* were the characteristics of a period of his busy life within the memory of us all. The lectures on the history of medicine on which this volume is founded were delivered when he was a young man, scarcely more than thirty years of age, to the classes of medical students in attendance at the University of Virginia, and we accept them, therefore, in their published form, not only as a memento of the industry and research so early displayed by their author, but also as a valuable contribution to medical literature on a subject interesting alike to the student and to every member of the profession.

One of the most marked traits of the author was undoubtedly his great power of condensation. Diffuseness he avoided under all circumstances, in his lectures, his writings, or his conversation. He seemed to get at the pith of an argument or a subject without taking all the intermediate steps; and when he had informed himself of a fact he communicated it to others without any unnecessary verbiage or circumlocution. The present history is no exception to this rule of his life. He has culled from the voluminous works of other days all the important facts connected with the progress of medicine, and, in a condensed form, given us the "history of important discoveries and improvements in medicine, of medical theories, of medical writers and practitioners, authors, founders of special systems and of celebrated schools of medical learning." Before, however, entering more particularly into the merits of the book now before us, it may not be inappropriate to refer to the remarkable career of its author, direct interest in which is now again awakened by this literary legacy.

The name of Professor Dunglison is thoroughly identified with the progress of medical literature in this country. It is true that before his arrival in America, in 1825, he had already published his "Commentaries on the Diseases of the Stomach and Bowels of Children," translations of "Larrey's Memoir on the Moxa" and "Magendie's Formulary of New Remedies," and an edition of "Hooper's Surgical Vade Mecum," in addition to numerous articles published in scientific, literary, and medical magazines and journals; but it was here that the solid foundation of an enduring reputation was first laid. At the University of Virginia, during nearly nine years of his residence there, he found time, in addition to his arduous labors as a teacher of medicine in a number of multiform branches,—as anatomy, surgery, the history of the progress and theories of medicine, physiology, materia medica, and pharmacy,—to edit, with one of his colleagues, a weekly magazine, entitled the "Virginia Literary Museum," to which he contributed a vast number of miscellaneous and non-medical articles on every variety of subject, especially of a philological character, embracing, also, a series of legends and stories of the English lakes,—in which beautifully romantic district he was born,—and also to publish, with Professor Long, a volume on Grecian and Roman geography, as well as to produce two far more important works,—his "Human Physiology" and "Medical Lexicon,"—each of which passed through a large number of editions; the latter being, even at this day, one of the best medical dictionaries in the English language, if not, indeed, the very best.

Such is a brief sketch of that portion of the literary career of Dr. Dunglison which was contemporaneous with the delivery of these historical lectures, the manuscript of which, after the lapse of many years, has now been arranged and published by his talented and accomplished son. We may naturally infer that this was the most arduous period of his life; for his authorship must have been to a certain extent ex-

perimental, with no reliable basis for prognostication of assured success in the future, and as a lecturer and practitioner, he was, of course, then laying only the groundwork of his reputation.

Lectures on the history of medicine were an unusual addition to a course of medical instruction, and in these days of devotion to what is called the more practical branches would by many be considered as only an embellishment; and yet they introduce the student to a knowledge of a department of medical literature without which his education is incomplete and unfinished. Assuredly no practitioner is thoroughly armed at all points who neglects to trace the paths through which others have travelled to reach the advanced position from which he is about to take his departure. Scanty provision is, however, made in the regular educational systems of the schools for the instruction of the student in the literature of his profession, while the busy practitioner soon almost forgets that it has an antecedent history, which, although crowded with numerous delusions and superstitions and follies, is nevertheless interesting as a study of a gradual or rapid transition from obscurity and mere conjecture to sounder reasoning and more accurate methods of observation and treatment.

This volume of historical lectures does not profess to be an exhaustive treatise on the subject, being rather, as already stated, a condensed narrative than an effort to create an elaborate textbook. It is not known whether its author ever contemplated submitting it to the public eye at all. It is probable that the manuscript was put aside and forgotten, in consequence of the great demand made upon his time for more comprehensive, systematic work. Be this, however, as it may, we think the editor has done wisely to issue this posthumous work, and to change its didactic character so as to present the facts in regular order of historical sequence. Medicine is here traced from its reputed origin in the distant mythological ages down through all the stages of its development among the primitive nations, and through periods of barbarism and semi-civilization and of enlightened knowledge, forming a continuous record of the changes which physic, as a science and an art, underwent as men grew more familiar with the laws of the human economy and the means of alleviating its morbid conditions. The editor states in his preface that some portions of these lectures are translated or condensed from the celebrated work of Sprengel, published three-quarters of a century since. In this way, the author has succeeded in incorporating a great deal of interesting material, based upon the authority of a universally recognized master of his subject, where absolute originality was not indispensable or essential.

The especial advantage which Dr. Dunglison's concise history offers is that facts similar to those which have been elaborated in the ponderous works of foreign authors especially, accessible only in a few public libraries, or buried on the book-shelves of private individuals, are here presented in the compass of about three hundred pages, in a popular, readable, and condensed form, agreeably offering to the profession an opportunity, much needed, of easily acquiring an ample knowledge of the various progressive steps in the development of medicine and of the men who have been instrumental in its culture.

The variety of topics discussed in this volume may be best exhibited by a glance at its contents. Beginning with the medicine of the ancient Egyptians, when mythological obscurity surrounded the medical attributes of Isis and Osiris and other deities, it traces the history of the numerous incidents and revolutions in the progress of medicine, frequently exhibiting the fallacies of sects and systems, through periods when it was still under the trammels of superstition, and through centuries of darkness and ignorance and of transition to the greater enlightenment of later years. It is a full outline history, not of untenable and evanescent theories, which, however important, constitute but a small feature of the narrative, but of all the personages and events whose association with it is essential to its completeness. The editor, therefore, is correct in stating that "the present work will supply the want, long felt by the profession, of a condensed history of the progress of medicine, presenting all the main facts in systematic order, avoiding, as much as possible, prolixity or unnecessary discussion of the merits of men and theories." Useful and valuable lessons may be gleaned from such a his-

tory, and none of more practical service to both student and practitioner than the avoidance of a blind adherence to the dicta of any master, however intelligent or profoundly versed he may be in medical science. Both must observe and reflect for themselves; and in such a study as Dr. Dunglison here offers of the vicissitudes which medicine has undergone in the round of ages, they will find a charming field of research well worthy of their investigation. They will learn, as the author himself observes, that many of the superstitions connected with the earlier history of medicine prevail now as they did formerly, but that the facility for the reception of the marvellous, and the imperfect state of experimental science at that time, occasioned their prevalence in the higher intellects, whilst at the present day they are mainly restricted to the vulgar and the illiterate, and that ages of obscurity, bootless conjecture, and dreamy enthusiasm preceded those of sound sense and rational observation. Such a study will doubtless also lead to a more intelligent and appreciative view of the condition of medicine in more recent days. The author has truly remarked that "when we take a retrospective glance at the condition of medicine in former times, and reflect upon the amount of ignorance, credulity, and superstition that prevailed, we cannot fail to be struck with the immense improvement that has taken place in comparatively modern periods, and must be encouraged in the hope that as the physical and moral sciences pursue their onward progress, and as the means of observation and experiment are augmented and facilitated, our own noble science may attain a pitch of perfection of which, at the present time, we can form no adequate conception,—shedding light where all is now obscurity, and tending to dispel doubt and difficulty wherever existent."

In this notice, which we have made as full as the space allotted us would admit, we have endeavored to give a fair account of the book. We have read it with much interest, and can recommend it to all who wish to get a knowledge of the history of our profession, as being the best outline history of medicine in our language. It is beautifully printed upon very good paper, and its value is greatly enhanced by a very copious index.

BOOKS AND PAMPHLETS RECEIVED.

Lehrbuch der Geburtshülfe, mit Einschluss der Pathologie der Schwangerschaft und des Wochenbettes. Von Dr. Karl Schroeder, Oö. Prof. der Geburtshülfe und Director der Entbindungsanstalt an der Universität Erlangen. Mit 26 in den Text gedruckten Holzschnitten. Dritte, neu durchgearbeitete Auflage. 8vo, pp. xiv., 698. Bonn, Verlag von Max Cohen u. Sohn, 1872.

GLEANINGS FROM OUR EXCHANGES.

ACTION AND USE OF CARBOLIC ACID.—Salkowski, considering it highly probable (*The British Medical Journal*, May 25; from *Pflüger's Archives*, 1872, p. 355) that variola depended upon a *contagium vivum*, administered carbolic acid in this disease during the epidemic which raged in Königsberg from September, 1870, to April, 1871, expecting to find benefit from its use. Unfortunately, his sanguine hopes were doomed to disappointment; and, after an extensive trial, his unprejudiced verdict is that the acid exerted no perceptible action on the disease, nor did it shorten its course. In other diseases of a non-infectious nature, however, in which he tried it, decided benefit resulted from its use: these were gangrene of the lung, skin-diseases, and derangements of the stomach. In one case of prurigo the effect was marvellous, though unfortunately only temporary. In vomiting he found it of great service. When given for some time, as in cases of gangrene of the lungs, it sometimes deranged the digestion considerably, causing pain in the stomach, loss of appetite, sickness, etc.; but these effects depended very much on the purity of the preparation employed, and impure acids, having an unpleasant smell, produced them very much more quickly. The post-mortem appearances which he found in the stomachs of rabbits to which he had given the acid showed very clearly that:

it should be very freely diluted, and only given in a concentrated form in very exceptional cases.

The only cases in which Salkowski recommends carbolic acid to be given in a concentrated form in pill are those cases of gangrene of the lung in which the patients complain that it causes coughing when given in any other form.

PRESYSTOLIC CARDIAC MURMUR.—Dr. A. Whyte Barclay, in the *Lancet* of March 2, 16, and 23, has an interesting paper upon this subject, in which he takes exception to the interpretations first placed upon this sound by Dr. Gairdner, and accepted as correct by Dr. Peacock, Dr. Wilks, Dr. Hilton Fagge, and indeed generally. Instead of considering this murmur a presystolic or auricular systolic one,—that is, due to the passage of blood through a narrowed auriculo-ventricular orifice, partly through the agency of a systole of the auricle,—Dr. Barclay prefers to consider it a *systolic regurgitant* murmur; for which he cites reasons, some of which have undoubted weight.

Of the first importance in regard to the production of murmur is the fact, too often overlooked, that the greater the force the more easily is vibration excited; and this, whether the murmur be obstructive or regurgitant. This furnishes explanation of the fact, familiar to all auscultators, that an obstructive murmur at the base and a regurgitant at the apex of the heart are those most frequently heard; they are both systolic,—both produced by the blood being impelled against the valves by the full force of the ventricular contraction. A regurgitant murmur at the base and an obstructive at the apex must each indicate a greater degree of alteration in the valves, as they are produced by forces relatively weaker. Dr. Barclay can scarcely conceive of a mitral valve so altered as to produce audible vibrations in the onward current while yet remaining capable of closing so completely as to be unattended by regurgitation. He says, moreover, “if the roughness be such as to produce vibration when the blood is propelled only by the comparatively powerless action of the auricle, how can it resist the impact of that fluid when driven against it with the whole force of the ventricle?”

With the absence of valves at the entrance of the pulmonary veins, the auricle can really exert very little power in driving the blood forwards; and in contracting it must empty itself backwards if any obstacle to the onward flow exist. Possibly hypertrophy may thus be produced, but it must always be inconsiderable.

Dr. Barclay holds it to be a mistake to believe that the contraction or systole commences with the first sound. The stroke and the first sound cannot take place till the whole muscle is thrown into a state of tension; and the systole begins when the first fibre assumes this state during the longer interval, *persists* so long as any portion remains contracted, and only ceases when the blood is expelled from the cavity and relaxation again takes the place of contraction,—in other words, when the impulse is felt against the chest-wall; but the shortening of the fibres goes on during a part of the shorter interval, and ends before the second sound can be produced. The whole of this period is embraced in the term “ventricular systole,”—the first sound occurring somewhere in the middle of the contraction,—at the point, in fact, where tension is complete and shortening ends. If this be conceded, no other interpretation than that presystolic murmur is regurgitant is admissible.

The essential character of the murmur is that it runs up to and terminates in the first sound, and consequently it must be produced while the tension of the ventricle exists. The necessary result of such tension is that the blood is forced against the apertures; and in the ordinary course of events the mitral aperture would close; but the contracted, hardened valve is not capable of ready adaptation, and therefore offers no efficient obstacle; and the contraction of the auricle does not prevent the blood from being drawn through it, as it meets with no resistance at the inlet of the veins. The unavoidable result is regurgitation, with its necessarily attendant murmur rendered all the more harsh by the roughness and hardness of the opening.

Dr. Barclay does not deny the occasional existence of an obstructive murmur at the mitral orifice, but on the other hand refers to a case, reported by Dr. Peacock, in which a loud systolic murmur at the apex is immediately preceded by another

fainter murmur, so as to constitute in that situation a double murmur, as an example of the somewhat rare condition of obstructive and regurgitant mitral murmur occurring in the same individual.

HYDRARTHROSIS TREATED BY INJECTIONS OF TINCTURE OF IODINE.—Dr. Keppler reports, in the *Wiener Medizinische Presse* for April 28, a case of hydrarthrosis of the knee-joint treated by Professor Dittel, of Vienna, by injections containing iodine. The patient was a lad eighteen years of age, who, five and a half years before coming under observation, had received a severe contusion of the knee, which was followed by an accumulation of the synovial fluid of the joint. To relieve this condition, Professor Dittel injected into the joint two scruples of a mixture composed of equal parts of water and of tincture of iodine, which was drawn off ten minutes afterwards. Very few general symptoms followed the operation, although it gave rise to synovitis. Seventeen days later the injection was repeated,—this time with pure tincture of iodine, which was allowed to remain. Synovitis was again excited by it, but was this time followed by a decided diminution of the swelling. The operation was again repeated a month later. The patient was discharged three and a half months after the institution of the treatment, completely cured.

EPIDEMIC ANASARCA.—M. le Dr. Limousin, Physician to the Hôpital de Bergerac, describes, in the May number of the *Archives Générales de Médecine*, an acute disease, characterized by anasarca, by dyspnoea, sometimes so extreme as to threaten death by asphyxia, by an albuminous condition of the urine, and by its occurrence in epidemics. Within three months—from March to June, 1857—he saw as many as thirty cases of this disease,—at a time, too, when no eruptive fever was prevailing. He has never before or since seen a similar epidemic. The patients were all seized in the midst of apparent health, generally without appreciable cause, with general oedema. Dyspnoea and albuminuria occurred later, and were evidently dependent to a great extent upon oedema of the lungs and kidneys. Dr. Limousin believes the cause of this disease to be something which produces a profound impression upon the circulation, similar in its nature to that which results from an obstacle to the course of blood in the heart or in a large vein. The symptoms generally disappeared readily under treatment,—hydragogue purgatives, especially jalap, being found most useful.

TREATMENT OF TETANUS AMONG THE CHINESE.—The patient smokes (*The Journal of Psychological Medicine* for April, 1872) in a pipe a mixture of from twenty to twenty-five centigrammes of crude opium and tea- or rose-leaves, which are worked up with a small quantity of molasses. When smoking, he must inspire as deeply as possible, and continue this operation until the narcotic influence is noticed. This continues, as a rule, three or four hours. The smoking is repeated as soon as the tetanic symptoms reappear. In the mean time, as much nourishment as possible is given. In using opium thus, it must be remembered that its narcotic effect is somewhat neutralized by tobacco.

THORACENTESIS.—In a recent paper contained in the *Bulletin Générale de Thérapeutique*, vol. lxxx. (*The Practitioner* for May, 1872), M. C. Paul gives eight cases of acute pleurisy, which, as soon as the diagnosis was ascertained, he at once treated by puncture of the chest. The results were extremely favorable,—the duration of the disease being materially shortened, all the patients being restored to health in the course of three weeks. M. Paul thinks the mode of treatment especially advantageous for private cases, and gives as a prognostic sign that when the effusion coagulates immediately after being withdrawn there is little or no tendency in it to re-collect.

REMOVAL OF THE KIDNEY.—Mr. Durham has recently removed the right kidney of a woman at Guy's Hospital. The patient was forty-three years of age, and is the same in whom, more than two years ago, Mr. Durham exposed the kidney with the expectation of finding a calculus in or about its pelvis. No calculus was found on that occasion, and, the kidney appearing to be healthy, the wound was closed. The patient recovered from the effects of the operation, but the severe pain, hæmaturia, and other symptoms for which it was under-

taken, continuing, the removal of the kidney was determined upon. Two days after the operation the patient was reported to be doing well; but we learn that she has since died.

SHOULD WE TREPHINE FOR APHASIA?—Lohmeyer, in the course of an article in *Langenbeck's Archives*, xiii. (*Centralblatt*, March 30, 1872), takes the ground that in cases in which abscesses, hemorrhages, or foreign bodies within the cranium have been diagnosed, the existence of aphasia would justify the operation of trepanning being performed, since it enables us to say with certainty what part of the brain is involved. In fifty out of fifty-three cases of aphasia that he has collected, the seat of the disease was on the left side of the brain, in the immediate neighborhood of the fossa of Sylvius.

DR. REUBEN A. VANCE calls attention, in *The Boston Medical and Surgical Journal* for May 9, 1872, to "The Effects of Menstrual Disorders upon the Vascularity and Nutrition of the Intra-Ocular Structures." In the majority of cases, he says, in which the performance of the menstrual function is attended by great bodily suffering or mental depression, the ophthalmoscope will reveal an increase of blood in the intra-ocular structures. In a small proportion of cases, however, the ophthalmoscopic appearances are directly the reverse.

THE ANTIDOTE FOR PHOSPHORUS—Prof. Bamberger (*Wiener Medizinische Presse*, January 28, 1872), as the result of a series of experiments, has found that oil of turpentine is not an antidote for phosphorus, and believes that in the present state of science the treatment of poisoning by phosphorus by the salts of copper is not only the most rational, but has hitherto been the most successful.

THE URINE IN POISONING BY PHOSPHORUS.—Dr. J. Ossikovszky reports a case (*Wiener Medizinische Presse*, March 31, 1872) of poisoning by phosphorus in which large quantities of leucin and tyrosin were found in the urine, showing that the condition of the liver produced by this poison is analogous to that which occurs in acute yellow atrophy of the organ.

EFFECTS OF OPIUM ON SNAKE-POISON.—A correspondent in *The Indian Medical Gazette* for March 1, 1872, says, "It is well known among Bengalis that opium-eaters can resist, to a certain extent, snake-poison."

MISCELLANY.

AN AMERICAN SURGEON DECORATED.—His Majesty the King of Sweden and Norway has bestowed, through the legation at Washington, upon Dr. Lewis A. Sayre, of New York, the knighthood of the Royal Order of the Wasa, "in acknowledgment of the services rendered by you to the study of medical science in Sweden."

This is accompanied by the letters patent and a most beautiful jewelled decoration, with Greek cross and crown, together with letters, couched in terms of friendship and admiration, from the King and the Royal Physician.

INTERNATIONAL OPHTHALMOLOGICAL CONGRESS.—The Executive Committee of the International Ophthalmological Congress in 1872 notify that it will be held on August 1, 2, and 3 at the Royal College of Physicians, Pall Mall, London. Gentlemen intending to read papers are requested to send the titles of them as soon as possible to Mr. Soelberg Wells.

THE PLEASURES OF SELLING POISONS.—The Chinese are said to have some very severe regulations as to the sale of poisons. The sale of arsenic is strictly prohibited, without evidence and witnesses as to the propriety of the sale. According to Dr. Porter Smith, both the seller and the buyer are decapitated if fatal results ensue; otherwise they are strangled.

If the druggist ignorantly or carelessly sell the poison, he receives eighty blows.

SCHOOL HYGIENE.—In a report on Public Health in the *Dublin Journal of Medical Science* for May (*The British Medical Journal*, May 18, 1872), Dr. Cameron refers to a valuable treatise by Virchow on the diseases incident to schools. Virchow quotes several eminent authorities, among others Guillaume, who found, among seven hundred and thirty-one scholars whom he examined, no fewer than two hundred and eighteen with distortion. The great majority of cases of scoliosis were among girls. In seventy-two cases noted by Knorr, of Munich, there were sixty females. As girls spend less time at school than boys, and fewer girls attend at schools, it is urged that scoliosis is not most frequently induced by bad posture while studying. To this objection it may be answered that boys during the hours of play counteract, by vigorous exercises involving the play of nearly all the muscles of the body, the evil influence of the school-room postures. On the other hand, girls, as a rule, do not practise any kind of gymnastics. Virchow attributes a large proportion of the pulmonary consumption of childhood to overcrowding in school-rooms, to sudden changes of temperature in passing from hot school-rooms into the cold outer air, to the dust of the school-room, and, lastly, to impaired respiratory movements induced by prolonged sitting.

THE PARIS FACULTY.—M. Béclard has been appointed Professor of Physiology, *vice* M. Longet, deceased; and M. Verneuil, Professor of Surgical Pathology, has been transferred to the Professorship of Clinical Surgery made vacant by the death of M. Laugier.

A DEMONSTRATION against M. Dolbeau, Professor of Surgical Pathology in the Paris School, took place on the 20th of March. As many as two thousand students are said to have crowded into the amphitheatre at L'Ecole de Médecine, and to have taken part in the disturbance, which lasted for an hour. M. Wurtz, the Dean of the Faculty of Medicine, although very popular with the students, was powerless to quell the riot. The demonstration was renewed at the next lecture, and as a consequence the lectures and examinations have been suspended. Different stories are told as to the cause of M. Dolbeau's unpopularity,—who is said by a correspondent of the *Medical Times and Gazette*, March 30, to be the ablest surgeon in Paris. He is accused of having denounced two communists who were under his care at the Hôpital Beaujoin, and this is given as one explanation of the affair. The truth is, however, that M. Dolbeau is very unpopular with the students, as he is unnecessarily severe at the examinations and in his hospital discipline. He is said, moreover, not to be very much liked by his confrères, of whom, when called in consultation by them, he is said to speak disparagingly—and in their presence, too—to their patients.

METEOROLOGICAL.—The mean temperature of the month of May was 68.63°, which is nearly six degrees higher than the average of mean temperatures since 1790. But it was by no means the warmest May on record, the highest mean temperature for the month having been 71° in 1802, and again in 1826. The lowest mean temperature recorded for May was 51.75°, in 1848. The highest temperature noted during the month was 91°, on the 10th; the lowest was 44°, on the 5th.

The quantity of rain which fell during the month was 2.80 inches, of which nearly an inch fell on the 30th. The total

for the year thus far is only 11.2 inches, while during the first five months of 1871 the rain-fall measured 16.68 inches. The mean rain-fall for May for the past thirty-five years has been 4.48 inches. The quantity which fell in May, 1871, was 3.38 inches.

THE SUBJECTS FOR THE PRIZE ESSAYS OF THE ASSOCIATION OF AMERICAN MEDICAL EDITORS.—The committee appointed on a proper subject for prize essays recommended the following for the prize to be awarded in May, 1873:

"The Pathology and Treatment of Diseases of the Ovaries."

And for the prize to be awarded in May, 1874, the following:

"At what stages of Pulmonary Tuberculosis is a change of climate desirable? what are the principles which should govern us in choosing the kind of change to be made? and the best localities in North America to send patients of this class."

The report of the committee was accepted, and the recommendation adopted.

The prize is open for competition to all medical editors belonging to the Association.

The following gentlemen were elected officers for the ensuing year: President, Dr. Theophilus Parvin, of Indianapolis; Vice-President, Dr. A. G. Stone, of St. Paul; Secretary, Dr. F. H. Davis, of Chicago.

PREDICTION OF THE ERUPTION OF VESUVIUS.—Mr. Silbermann addressed a letter to the President of the Académie des Sciences, which was dated Saturday evening, May 4, and forwarded by post. In this he announced that on Monday morning, May 6, an eruption of Vesuvius, more violent than those that had preceded it, would take place. In the letter he detailed the atmospheric conditions which had induced him to predict the greater violence of the eruption then to take place.

MORTALITY FROM SMALLPOX.—The number of deaths from smallpox in Philadelphia during the weeks ending June 1 and 8, 1872, were respectively 41 and 24, of which 40 were of minors.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending	
	June 1.	June 8.
Consumption	33	33
Other Diseases of Respiratory Organs	27	44
Diseases of Organs of Circulation	14	16
Diseases of Brain and Nervous System	67	51
Diseases of the Digestive Organs	16	25
Diseases of the Genito-Urinary Organs	7	6
Zymotic Diseases	67	50
Cancer	4	7
Casualties	11	11
Debility	33	21
Intemperance	1	0
Malformation	0	1
Old Age	7	8
Scrofula	0	1
Stillborn	12	13
Suicide	2	0
Tumors	1	1
Unclassifiable	7	14
Unknown	3	1
Totals	312	303
Adults	158	148
Minors	154	155

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MAY 19, 1872, TO JUNE 4, 1872, INCLUSIVE.

By S. O. 118, War Department, A. G. O., May 21, 1872, the following changes are made:

SIMPSON, J., SURGEON, relieved at Fort McHenry, Md., and assigned to duty as attending surgeon and examiner of recruits at Baltimore, Md.

SIMONS, JAMES, SURGEON, assigned to duty as Medical Director, Department of the Gulf.

PAGE, CHARLES, SURGEON, to report to the Commanding General, Department of the Platte, for assignment to duty, to take effect June 20.

The following officers are relieved from duty in the Departments wherein they are now serving, and ordered to report to the Commanding Generals of the Departments to which they are transferred, for assignment to duty

HASSON, A. B., SURGEON, from Department of the South to Department of the East.

HORTON, SAMUEL M., ASSISTANT-SURGEON, from Department of the East to Department of Texas.

WHITEHEAD, WILLIAM E., ASSISTANT-SURGEON, from Department of the East to Department of Texas.

BUCHANAN, WILLIAM F., ASSISTANT-SURGEON, from Department of the East to Department of Texas.

COUES, ELLIOTT, ASSISTANT-SURGEON, from Department of the East to Department of Dakota.

JAUQUET, G. P., ASSISTANT-SURGEON, from Department of the Lakes to Department of the Platte.

BROWN, H. E., ASSISTANT-SURGEON, from Department of the Lakes to Department of Dakota.

JESSOP, S. S., ASSISTANT-SURGEON, from Department of the Lakes to Department of the Missouri.

BARTHOLOF, J. H., ASSISTANT-SURGEON, from Department of the South to Department of the Lakes.

WILSON, A. D., ASSISTANT-SURGEON, from Department of the Platte to Department of the East.

LORING, L. Y., ASSISTANT-SURGEON, from Department of the Missouri to Department of the East.

NOTSON, WILLIAM M., ASSISTANT-SURGEON, from Department of Texas to Department of the Lakes.

DE WITT, C., ASSISTANT-SURGEON, from Department of California to Department of Arizona.

CARVALLO, C., ASSISTANT-SURGEON, from Department of Texas, and to report in person to the Surgeon-General.

ROSE, GEORGE S., ASSISTANT-SURGEON, from Department of California, and to proceed to Fort Yuma, California, reporting thence to the Commanding Officer, Department of Arizona, for assignment to duty.

GRAY, C. C., SURGEON, granted leave of absence for four months, with permission to go beyond sea.

EDWARDS, L. A., SURGEON.—By S. O. 124, War Department, A. G. O., May 29, 1872, granted leave of absence for thirty days, with permission to apply for an extension of sixty days.

BAILY, J. C., SURGEON.—By S. O. 68, Department of California, May 10, 1872, assigned to duty at Benicia Barracks, Cal., the order assigning him to duty at Camp Halleck, Nevada, being revoked.

CAMPBELL, JOHN, SURGEON.—By S. O. 100, Department of the East, May 27, 1872, assigned to duty at Fort Adams, R.I.

SPENCER, WILLIAM C., SURGEON.—By S. O. 124, c. s., War Department, A. G. O., assigned to duty as Attending Surgeon, Headquarters Military Division of the Missouri, and examiner of recruits at Chicago, Ill.

BACHE, D., SURGEON.—By S. O. 118, War Department, A. G. O., c. s., granted leave of absence for thirty days.

FORWOOD, W. H., ASSISTANT-SURGEON.—By S. O. 47, Department of the Lakes, May 29, 1872, granted leave of absence for thirty days.

WOLVERTON, W. D., ASSISTANT-SURGEON.—By S. O. 94, Department of Dakota, May 19, 1872, granted leave of absence for twenty days.

GIBSON, J. R., ASSISTANT-SURGEON.—By S. O. 112, Department of the South, May 31, 1872, assigned to duty at Charleston, S.C., relieving Surgeon Hasson.

BARTHOLOF, J. H., ASSISTANT-SURGEON.—By S. O. 121, War Department, A. G. O., May 25, 1872, leave of absence extended thirty days.

ROSE, GEORGE S., ASSISTANT-SURGEON.—By S. O. 82, Military Division of the Pacific, May 15, 1872, to proceed to Washington City, via Panama and New York, in charge of applicants for Soldiers' Home and an insane man, reporting upon arrival to the Adjutant-General.

POWELL, R., ASSISTANT-SURGEON.—By S. O. 76, c. s., Department of the Gulf, relieved at Jackson, Miss., and to report for duty at Jackson Barracks, La.

KING, J. H. T., ASSISTANT-SURGEON.—By S. O. 88, Department of the Platte, May 27, 1872, assigned to duty as Post-Surgeon at Fort McPherson, Nebraska.

ELBREY, F. W., ASSISTANT-SURGEON.—By S. O. 88, c. s., Department of the Platte, assigned to duty as Post-Surgeon with troops at Beaver City, Utah.

DICKSON, J. M., ASSISTANT-SURGEON.—By S. O. 79, Department of the Platte, May 15, 1872, to report for duty to the officer commanding camp on Red Willow.

MONDAY, JULY 1, 1872.

ORIGINAL LECTURES.

ON EMETICS.

BY JOSEPH CARSON, M.D.,

Professor of Materia Medica and Pharmacy in the University of Pennsylvania.

LECTURE II.

Symptoms attending upon the Operation of an Emetic.

—The first evidence of the effect of emetic substances is the peculiar feeling in the gastric region that is termed nausea.* This occurs ten or fifteen minutes after the article is taken into the stomach. It is attended with swimming of the head, quivering of the lips, flow of saliva, and pallor of the countenance and lips; the eyes lose their lustre, etc.; there is a sense of faintness and relaxation; the pulse becomes feeble; and a cold, clammy exudation takes place from the skin. During vomiting, which succeeds to these symptoms, the circulation is perturbed and embarrassed, the head becomes congested from the impeded return of blood, and there is a feeling of fulness of the vessels of the brain; the face is flushed, the eyes are injected, and the temperature is raised. The pulse then becomes fuller from the pressure on the aorta and the impediment to respiration. When the operation has been completed, the system becomes tranquillized, the perspiration is uniform, the pulse sinks somewhat below the previous standard,—is somewhat weaker,—and there is a disposition to sleep. The perspiration now established is free and warm, unlike the cold, clammy perspiration during the nausea and early depression. Sometimes the above-enumerated symptoms may be more intense than specified,—the face may swell and become discolored, and there may be pain in the head and eyes, which become turgid and watery.

Matters Ejected.—The matters that are ejected are the contents of the stomach, mucous secretion from the stomach, and bile that has been forced from the gall-bladder into the duodenum and thence passes into the stomach; and lastly mucus is discharged from the bronchi and trachea. Bile in itself is emetic, and hence when irritation of the stomach or of the duodenum has extended to the liver bile is secreted inordinately, and being conveyed to the stomach excites vomiting. There are certain persons in whom this is of ordinary occurrence. When vomiting is violent and prolonged, there can be no doubt that the secretion of the pancreas adds to the materials ejected.

A phenomenon that should not be overlooked in connection with vomiting is the distention of the stomach with air. This air has been swallowed in the spasmodic efforts attending nausea and preceding vomiting, and after filling the stomach is discharged with solid and liquid matters.†

The nature of the matters thrown from the stomach depends upon the affection under which a patient is laboring, and hence in cancer of the stomach they have special characteristics. The same is the case in hæmatemesis, where the blood that is effused is thrown up; in yellow fever, where black vomit indicates a hemor-

rhage with digestion partially of the blood; and so it is in melæna, in cholera, etc. Diagnostic indications, in fact, are derived from this source.

Bilious vomiting does not occur in the first instance; it results from the pressure upon the liver as an after-effect. The same may be said of the pancreatic fluid, which at last presents itself as a glassy, tough, or ropy discharge.

Ways of Inducing an Emetic Operation.—The ordinary method of administering an emetic article is its introduction into the stomach; and here it may produce its effects in one or other of the modes that have been discussed, namely, by a local impression that is transmitted, or by absorption from the mucous membrane. But the stomach does not present the only absorbing surface of the body. Emetic articles may be introduced into the rectum. Even from the sound skin decided effects will result, as in the case of tobacco, the active principle of which is absorbed. The lungs also constitute an absorbing surface; and hence the emetic effects of smoking tobacco on one unaccustomed to the practice. The rapidity of operation will depend upon that of absorption. The most speedy mode of introduction into the circulation is by injection into the cellular tissue, and this may readily be accomplished by means of hypodermic injection, in cases of urgency.

Variable Nature of the Effects.—The exhibition of emetic substances is not always followed by evacuation of the stomach. Certain individuals are not susceptible of an emetic operation,—there seems to be in them an inability to vomit, although nausea may be induced; and the force of the impression may be directed upon some other organ, or expended upon the system generally. Thus, instead of acting as emetics, some substances may become purgatives, or they may induce great prostration, and determine to the skin with profuse perspiration. This variation may depend upon idiosyncrasy, or it may arise from disease. The mode of administration also may be influential in giving direction to the effects. When disease is the cause of this departure from the usual mode of operating, it is so in consequence of modifying the sympathetic susceptibility existing in the organs concerned in the act of vomiting.

Disparity as regards the time required to operate is also presented by emetics. Some are exceedingly prompt, while others are tardy. And this, again, depends upon the mode of operating. Those whose mode of operating is local are for the most part prompt, as, for instance, mustard or sulphate of zinc; while such as require absorption are slower in their effects, and leave the system more decidedly under their impression. Confirmatory of this statement were the experiments of Dr. MacLagan, who found that when the vagi nerves were cut the sulphates of zinc and copper did not act promptly as usual with these salts; but after some time the effect being produced was attributed to absorption.‡ A latitude of selection is afforded.

Articles not belonging to the class of emetics may occasion vomiting: thus, purgatives under the condition of irritability of the stomach or excessive excitability of the brain may be thrown up. The same is the case with other medicinal articles. Food in itself may be the occasion of vomiting.

The occurrence of the paroxysms of vomiting will depend upon a number of circumstances: thus, if the stomach be fully emptied, the desire to vomit may pass off. If, however, this evacuation is but partially accomplished, there will be a continuance of effort. Again, should bile continue to be regurgitated, it may prove a

* Although the sensation of nausea is referred to the stomach, this does not include all that pertains to it. It is not like mere pain or uneasiness in the organ, which can be strictly located, but there is a general sense of disturbance which must be referred to the nervous system, involving the brain as the organ of cognition, as well as the stomach. The condition is one of unusual malaise connected with the tendency to vomit. To be understood, nausea must be experienced; it cannot be described, nor is it possible to determine what particular condition of the nerves is induced.

† Magendie (loc. cit.), 770.

‡ The Action of Medicines in the System, by Frederick William Headland, M.D., etc., Am. ed., 1839, p. 110.

source of disturbance and prolong the paroxysms. In irritable conditions of the stomach there may be a continuance of the retching; and this, again, depends upon the extent to which the central nerve-masses have been affected by the absorption of the article that has been employed.

Primary and Secondary Effects of Emetics.—The indications for their employment are based upon their evacuant operation and the consequent effect upon the stomach, as well as upon the influence exerted over contiguous viscera,—which may be termed the primary effects,—and additionally upon the impression that is made upon the general system and upon distant organs, which is secondary. Both of these modes of operating are physiological and therapeutical, and both are of great importance.

By unloading the stomach the organ is relieved of matters that oppress and embarrass its function, or that are dangerous from the local irritation produced by them, or which, by absorption from its surface, may act as poisons upon the economy. The local effect of an emetic is alterative to the secreting mucous surface of the stomach, and so far restorative of its functional operations. In connection with the impression upon the mucous surface, and the promotion of secretion from the muciferous follicles and vessels, a fluxionary movement towards the stomach may be attributed to their operation. A case to this effect was reported by Dr. Darwin, where a patient vomited six pints of fluid who had swallowed only one.

Another primary effect is the pressure upon the liver, the spleen, and the pancreas. In the case of the liver, there is a stimulus thus given to the circulation in the organ, and the restoration to a healthy active state, if torpor exists in it; while at the same time the gall-bladder is emptied of its contents.

It is stated by Edwards that the movement of the bile in the excretory canals of the hepatic apparatus must be determined by the fact of the continued production of this fluid in the depths of the liver, whose tissue is little distensible. But the flow of this fluid is accelerated at certain periods, either by contraction of the parietes of these tubes, or of the gall-bladder, or by the intermittent pressure exercised upon this viscus by adjacent organs. This last effect is manifested at each inspiratory movement, and becomes still greater when the parietes of the abdomen contract with violence, as in the efforts of vomiting.*

Haller pointed out the effect of respiration on the flow of bile. Leuret and Lassaigne noticed its discharge from the duct of a horse when the diaphragm contracted in breathing. M. Blondlot has also seen, in dogs, in whom he had established a biliary fistula, that this fluid flowed forth abundantly when the animal vomited, or made efforts for the evacuation of the excrements.†

With respect to the pancreas, free discharge may be thus procured from it; and should the spleen be congested, and languor be present in the portal circulation, the concussion that is experienced will relieve this state and induce a return to normal activity.

The secondary effects, or those upon the system, depend upon the removal of materials that create irritation of the stomach which is reflected generally; upon the abstraction of food, which deprives the system of nutritive elements, and induces a depressing or antiphlogistic impression; and upon a reduction of force in the arterial system, with free secretion from the emunctories, which are the results of the perturbation to which the organs have been subjected, as well as of the sedative character of the agent that may have been

employed. The pressure that is made upon the lungs as well as upon the stomach will have the effect of relieving them of accumulated secretions, and thus promote a freer aeration of the blood in them. The throat also is cleansed of vitiated secretion.

As absorption is the result of depression of the circulation, a remote effect of an emetic operation will be the promotion of this physical operation. It may indeed be asserted that the operation of emetics is general and revolutionizing, extending to all the functional and organic movements.

As emetic substances differ materially in the production of the effects that have been stated, they must be selected in accordance with the indication that presents itself in each case to be subjected to treatment. Some of them simply evacuate the stomach without much nausea and subsequent depression; many of the mineral emetics are of this nature, and it may be stated they are such as produce their effects by arousing an influence in the stomach itself, which is sympathetically transmitted to the nervous centres. Some, again, are powerfully perturbative and forcible in their operation, while others are depressing and exhaustive from the nature of the attendant impression upon the nervous and circulatory systems,—effects which are inherent to the article, irrespective of an emetic effect.

The indications for the employment of emetics are:

1. *To unload the stomach, and to remove from it noxious substances.*—In cases where poisonous substances have been taken into the stomach, this indication at once presents itself, and is to be met by articles that operate promptly. Such articles are therefore chosen as produce their effects by a direct action upon the stomach itself, which, by an irritant impression, call forth a reply from the brain that is communicated to the respiratory and abdominal muscles, whose synergy contributes to vomiting. Mustard is one of those thus efficient, as are sulphates of zinc and copper. In those cases where there is danger of the brain being obtunded by the absorption of the poison, decided emetic effects are desirable immediately, and hence the preference given to those articles.

In cases of narcotic poisoning there are two sources of inertia: one, a local paralysis or anæsthesia of the stomach; the other, the obtuseness of the brain and nervous system.

Enough of the emetic substance must be given to induce the effect, while care is to be exercised lest the irritation produced be so great as to be in itself injurious. Inflammation of the stomach may arise from too large a dose.‡ To emetics of this kind may be attributed the local impression specified by Barbier as decidedly irritative to the gastric mucous surface, “which becomes engorged and reddened, warmer and more sensible,” and this state is extended to the duodenum. If the condition exist that has been termed by him a “sort of crispation which closes the pores,” the absorption of a poisonous article may be interdicted; and hence the further advantage of such articles in narcotic poisoning.§

It is not difficult to diagnosticate the presence of crude, indigestible, offensive matters in the stomach, especially when a knowledge is possessed of the physical temperament of the patient, and of the kind of life that is led, and the usual food taken. The existence of this gastric load is sufficiently demonstrated by the tension and oppression of the præcordial region, or by colicky pains, by anorexia, and nausea, and there may be general malaise, feverish excitement, or derangement

* Op. cit., vi. 473.

† Essai sur les Fonctions du Foie, 1846, p. 63.

‡ A case of poisoning by laudanum is given by Mr. Stanley in the 6th vol. Transactions of College of Physicians, where inflammation of the stomach was produced by sulphate of zinc given, but not acting. See also Paris, Pharmacologia, ed. 1843, p. 199.

§ Traité élémentaire de Matière Médicale, par J. B. G. Barbier, Paris, 1830, tome iii. p. 304.

of the nervous system, with headache. Accompanying these symptoms are a vapid and bitterish taste, fuliginous coating on the tongue and palate, fetid eructations and breath. Delirium sometimes is engendered from this cause, or the brain may be affected, with stupor or simulative apoplexy.

The choice of relief in cases of this description lies between emetics and purgatives. It was inculcated by Hippocrates, and repeated by Galen, that matters which oppress the economy should be thrown off by organs the most convenient. Purgatives are to be preferred where the tumefaction is in the lower abdomen,—when there is constipation, flatulence in the intestines, weight in the lumbar region, and indications of the lower bowels being the seat of disturbance.*

Children frequently suffer from indigestible matters in the stomach, becoming restless, sleepless, and feverish; or if sleep occurs, it is attended with startings, half-delirious wakings, cries, and moans. The abdomen is hard and distended, and the tongue furred. A mild emetic under such circumstances affords the required relief.

When colic can be clearly traced to the presence of irritating ingesta, the simplest mode of treatment is to evacuate the stomach.

By removing offending matters from the stomach, healthy secretion is promoted. It is impossible for these substances to remain for any length of time in contact with the mucous membrane without giving rise to disordered secretions, and this is shown in the furred tongue and foulness of the mouth produced by their presence in the stomach. Not only is healthy digestion interfered with, but by fermentation new matters are generated to produce irritation: hence where acidity and where what has been termed a *saburral condition* exists, not confined solely to the mouth, but extending to the stomach, a complete emptying of the organ and stripping it of its adherent secretions will relieve the mucous membrane of a clog upon its restorative tendency, and secure healthy secretion from it.

The pasty, viscid, fetid matter that is produced upon the tongue and pharynx, most probably extending to the stomach, and which is composed of effete epithelial structure and decomposed mucus, cannot be attributed to inflammation. The mucous surface beneath the deposit is pale. The formation of such matter may originate in irritation, but it is evidence of depraved nutritive activity that has taken the place of healthy action in the mucous membrane. It may be, however, that the state of irritation induced in the way specified may pass into inflammation. Aphthæ are attributable to this perverted state, and may sometimes be relieved by a gentle emetic. Local deranged activity may be changed, and a new condition substituted for it. It has been supposed by Trousseau and Pidoux that a substitutive impression is made by the use of emetics.

Cutaneous affections may be the result of a sympathetic influence from the stomach, induced by articles taken into it which disagree with it. Urticaria, for example, may be traced to this cause. In this, however, idiosyncrasies play a very important part. To remove the offending substance is the proper plan of treatment.

In exanthematous diseases emetics were formerly much employed. Dr. Richard Harrison, of London, recommended them highly in scarlatina.

Where the intention is simply to relieve the stomach, the mildest articles are to be employed.

In the treatment of "Putrid Malignant Fevers," by which Huxham evidently meant Typhus, he especially dwells upon the propriety of washing out the stomach. In this, he asserts, assistance is given to nature. "Scarce

any infectious fever makes an attack on any person without bringing on a sickness at the stomach and vomiting. As the morbid effluvia are swallowed with the saliva, etc., may they not, in part at least, be washed off and rejected by co-operating with nature in promoting vomiting? By which also any bilious acrid putrid colluvies that may lie in the stomach is carried off, which otherwise, by growing more and more corrupt, would produce a variety of ill symptoms and greatly increase the original disease."†

Dr. Chapman, who maintained the gastric origin of fevers long before the promulgation of the doctrines of Broussais, declared "that emetics are highly important remedies in fevers, which for the most part are attended in the commencement with nausea, vomiting, and other indications of disordered stomach. They, under such circumstances, are productive of much advantage."‡

What applies to continued and intermittent fevers applies to all diseases where the vital forces are oppressed by offensive saburral materials which abound in the digestive canal. Stoll appreciated this condition in inflammation of the lungs, connected with gastric embarrassment, and established the most useful rules for its relief. The affection is now known as bilious pleurisy, or bilious pneumonia. Emetics in this disease are advantageous whenever there is accumulated in the stomach or duodenum a considerable quantity of bilious irritating matters of a sour, bitter taste, a disagreeable odor, and a green color. The practice of Stoll is concurred in by Dr. Chapman. This affection, which seems to have a relation to the miasmatic fever of the southern country, will not, according to this authority, bear general depletion, but may be treated with other evacuants. "Desisting, therefore, from venesection, or using it with moderation and care, we rely mainly on the thorough evacuation of the alimentary canal by antimonial emetics and mercurial purges, and subsequently by diaphoretics, relieving the affections of the chest and head by topical bleeding and blisters."§

2. *To unload the organs contiguous to the stomach, to promote secretion from these organs, and to excite the portal circle.*—In cases of jaundice or chronic hepatitis, there is a static condition of the blood in the liver and in the portal circle which may be removed by the concussion of an emetic, so that the functional secretory operations may be restored and congestion relieved. If too much excitement or inflammatory action be not present, happy results may follow the operation.

Dr. Paris informs us that by violent and protracted retching a person will sometimes become jaundiced. This is owing to regurgitation of bile from the acini of the liver into the venous system, occasioned by pressure upon the organ and the gall-bladder. Haller has shown with what facility a subtle injection, when thrown into the hepatic duct, will escape by the hepatic veins, upon which Dr. Saunders observes, "I know this to be a fact, for I have ascertained by experiment that water injected in the same direction will return by the veins in a fuller stream, though very little force be used."||

It has been the custom to commence the treatment of autumnal fevers with an emetic, with the intention of unloading the liver, of promoting secretion from that organ, and at the same time of impressing the portal circulation. The older pathologists laid much stress upon the presence of bile in the stomach and alimentary canal in autumnal fevers. Stoll supposed that bile accumulating in the stomach and intestines irritated

† An Essay on Fevers, by John Huxham, M.D., edition of 1872, London, p. 111.

‡ Elements of Therapeutics and Materia Medica, by N. Chapman, Professor of Institutes and Practice of Medicine and Clinical Medicine in the University of Penna., 1827, vol. i. p. 122.

§ Op. cit., vol. i. p. 140.

|| Pharmacologia, p. 205.

* Élémens de Thérapeutique et de Matière Médicale. 'Alibert, vol. i. p. 221.

these organs, and when reabsorbed and carried into the circulation produced disturbance of the heart and fever, irritated the brain, and caused delirium, apoplexy, or convulsions, and even induced inflammation of the pleura or lungs. When the school of "gastric pathology" came into estimation, another doctrine was taught: "that bilious fever is a gastro-enteritis with predominance of sympathetic irritation of the liver.* The bile then was supposed to be produced in quantity by the extension of irritation from the mucous membrane to the liver.†

Although influences of an irritative character that are brought to bear upon the mucous membrane at the mouths of glandular ducts may exert a reflex nutritive influence upon the secretion of glands, and thus in the case of the liver may be a cause of increased flow of bile, yet in fevers presenting bilious symptoms there is a deeper-seated pathological cause for the disorder of this organ and for the concomitant derangements. Emetics then are not to be given for the mere purpose of evacuating bile, however much relief may be afforded by its discharge from the stomach; or for a substitutive action upon the mucous membrane; but to impress the chylipoietic viscera, and to relieve the organs concerned in hæmatisis which are embarrassed by congestion, with a static condition of the blood and suspended function.

Much stress has been laid upon the promotion of secretion by the irritation produced by emetic substances being transmitted to the secreting organs through the ducts. Barbier states, with reference to the liver and pancreas, "We know that irritation induced by an emetic substance upon the extremities of these ducts is felt by the organs to which they pertain. During the action of an emetic, these last undergo a change analogous to that noticed in salivary glands when any substance is held in the mouth that irritates the extremity of their excretory ducts: the vitality of these glands is augmented, blood is disposed to their parenchyma, their secretory action is accelerated, and there is discharged an abundance of fluid."‡ Although this is true as a general rule for irritating substances, still it cannot be said that in the case of some emetics it is correct. Small quantities of tartar emetic or ipecacuanha may be attended with profuse secretory action, and we must seek for the explanation in the depressing influence exercised upon the nervous and circulatory systems from absorption, which is felt in the discerning organs. It is similar to that exhibited upon the skin. The salivary glands which have not felt reflex irritation locally from the mouth are equally affected with undue secretion when an emetic enters the circulation. Nausea and depression of circulation in organs may induce free secretion from them.

In fevers of a miasmatic origin complicated with bilious symptoms there is obvious deprivation of the functional if not of the organic processes of the liver, with a derangement of the normal condition of the spleen. It has been demonstrated that hæmatisis is interfered with, and but imperfectly performed; black pigmentary matter, the débris of the organic corpuscles of the blood, is abundant in this fluid, and deposited in the tissues, especially the serous coverings of the organs. Under these circumstances, to give a gentle impulse to the circulation in the organs evidently concerned in the production of healthy nutrient fluid cannot be otherwise than promotive of good results.

When a paroxysmal fever, not marked by bilious symptoms, is attended by enlargement of the spleen and by portal obstructions, the concussion from emesis may

give an impetus that is salutary to the circulation, and aid in the restoration of functional activity. It was recommended by Galen, and practised by subsequent physicians, to break up chills by anticipating their occurrence. The practice was advocated by Sydenham, and it had been inculcated by Alexander of Tralles. Dr. Chapman states that in the malignant forms of intermittent fever, "when in the cold stage reaction does not take place, and as a consequence undue accumulations of blood exist in the brain, or lungs, or some of the abdominal viscera, inducing a perilous state of things, active vomiting is productive sometimes of the most important effects."§

In connection with the chill of intermittent fever, sometimes there is vomiting of quantities of bilious matter, evidently from the sudden arousing of the activity of the liver by the retrocession of fluid from the exterior portions of the body. There is engorgement of the chylipoietic viscera, with modification of the internal nutritive processes.

It has frequently happened that when the usual anti-periodic treatment has been ineffectually pursued, the employment of an emetic has been perfectly successful in the removal of the pathological conditions referred to and in enabling the preparations of cinchona to become absorbed.

From the mechanical force applied to the abdominal organs, assistance is given to the passage of gall-stones in bilious colic, or even of calculi from the kidneys in their passage to the bladder. The relaxation induced by emetic articles concurs to this end. This is a method which nature herself not unusually adopts, as sympathetic vomiting attends the attacks of pain from such cause, and relieves the affection.

In cases of persistent and obstinate constipation of the bowels, the use of emetics has been successful. This is owing to the concussion produced upon the intestines, and especially the colon, and to the relaxation attended with free secretion from the glandular organs. A full flow of bile and intestinal mucus will act cathartically. Attention was drawn to this mode of treatment by a paper of Dr. Hossack;|| although it has since been shown to be an old mode of medication.

ORIGINAL COMMUNICATIONS.

HÆMATOXYLIN AS A STAINING MATERIAL FOR ANIMAL TISSUES.

BY J. W. S. ARNOLD, A.M., M.D.,

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AMONG the many useful reagents which are employed by the histologist in the investigation of tissues, those known as *staining materials* deserve to be esteemed of great value.

Since the introduction of carmine by Gerlach, many facts have been brought to light, by the aid of this substance in tinting animal structures. The points connected with coloring artificially are too well known to require any mention of their merits. I wish, however, to call attention to a means of staining that possesses some advantages over carmine, and, so far as I can learn, has only been employed to a limited extent abroad and at home.

To make a successful "carmine imbibition" requires some little practice, and even the best results obtained

* This is the language of Trousseau and Pidoux, who did not belong to the school of Broussais.

† An inordinate flow of bile may occur without fever of a bilious nature; and gastritis, when pure, either idiopathic or factitious, exists without bilious symptoms.

‡ *Traité élémentaire de Matière Médicale*, tome i. p. 304, Paris, 1830.

§ Op. cit., vol. i. p. 124.

|| *New York Medical and Physical Journal*, vol. i. The review which shows its ancient origin is in the *London Medical Repository*.

leave one point at least untouched. The special action of carmine is upon the *nucleus* of the cell. This becomes highly colored, and the protoplasm is left unstained, except in the case of a very prolonged action of the tinting fluid,—when both parts of the cell are colored alike. Of course, in the first instance, much will be lost when the tissue is mounted in any substance such as balsam or damar. Again, the objection to the over-staining lies in the fact that no distinction can be made between the nucleus and the protoplasm. In the case of tissues which require preliminary hardening, in order that fine sections may be made, unless drying—*i.e.* desiccation—freezing, or alcohol be the means of accomplishing this end, carmine gives rather poor results. The imperfection of carmine imbibitions is well known when the tissue has been hardened by chromic acid or bichromate of potassa. Alcohol as a means of hardening tissues is of the greatest service, but there are cases in which it is much more desirable that the tissue should be treated with some of the chrome preparations, and finally with alcohol, or that the entire hardening should be effected through the agency of either chromic acid or the bichromate of potassa.

I wish now to describe a process that seems to do away with the two objections raised against carmine. This method I have made use of for nearly two years, and the excellent results it gives can be vouched for, not only by myself, but by many students who have worked under my directions; in fact, it has taken the place of carmine in my laboratory to a considerable extent. The coloring-matter of logwood (*Hæmatoxylon campechianum*) is one of the most valuable staining materials known to me.

This substance was, I believe, first used by C. F. Müller in his investigations on the cornea. The method which is recommended by Müller can be found in the works devoted to microtechnology. I wish to give merely the manner in which the staining solution is made and used in my own laboratory.

The ordinary logwood extract is finely pulverized in a mortar, and about three times its bulk of alum (in powder) added. The two ingredients are well rubbed up together, and mixed with a small quantity of distilled water. The *complete admixture* of the alum and hæmatoxylin is necessary, and this will require fifteen to twenty minutes' vigorous stirring. More water may now be poured on, and the solution, after filtration, should present a clear, somewhat dark violet color. If a dirty red is obtained, more alum must be incorporated, and the mixture again filtered. By always having an excess of both alum and hæmatoxylin in the mortar, a saturated solution can be obtained, which, after infiltration, may be combined with alcohol,—one ounce of the logwood fluid with two drachms of seventy-five per cent. alcohol. I have found that a much better color can be had by allowing the mixture, after thorough trituration, to stand for several days before filtering and adding the alcohol. Should a scum form on the surface of the liquid after it has been some time made, a few drops of alcohol and careful filtering will be all that is required. With a strong solution, such as has been described, the coloring is very rapid, requiring but a few minutes; whereas, if a slower tinting be desired, the fluid may be diluted with a mixture of one part alcohol and three parts water. Whether the tissue has been previously hardened in alcohol or in any of the chrome compounds, it is colored equally well,—the nucleus, of a most brilliant purple; the cell-body, of a distinct neutral tint. An *over-staining* causes an almost perfect blackening of the nucleus, while the protoplasm becomes purple. In many instances where carmine has given but indifferent results hæmatoxylin will be found to succeed most admirably. As to the stability of the coloring, I need only remark that specimens tinted and

mounted in December, 1869, show as perfectly as when first put up.

I would conclude with the following method of treating pathological new formations (histoid tumors), etc.

The cut is placed for the required time in the hæmatoxylin fluid, and is then immersed in distilled water to remove the crystals of alum which might otherwise adhere to the surface of the tissue. From water the section is transferred to seventy-five per cent. alcohol, when, after soaking for from ten to fifteen minutes, it is clarified in oil of cloves,* and may be either mounted immediately in balsam dissolved in chloroform, or in damar varnish.

It might appear contrary to all that has been written on the subject of treating tissues to advise that the section should only be placed in moderately strong alcohol before clarifying and mounting, but by means of oil of cloves and the process I have given none of the curling up and distorting will follow which cannot be avoided when absolute alcohol, benzole, or turpentine is employed to dehydrate and render transparent. All that I ask is that those who are interested in making preparations of animal tissues should satisfy themselves as to the truthfulness of the statements here made.

THE IMPORTANCE OF EARLY DIAGNOSIS IN SPINAL ARTHROCHONDRITIS,

AS ILLUSTRATED BY THE HISTORY OF TWO CASES.

BY BENJAMIN LEE, M.D.,

of Philadelphia.

CASE I.—J. W., resident of Philadelphia, examined November 30, 1868, aged six years; both parents living, and in good health; pulmonary phthisis inherited on father's side through two generations; general health moderately good; not robust; complexion fair, skin thin, hair brown, temperament nervous, digestion rather feeble; has a slight tendency to nasal catarrh. One week since, she fell, in going down a flight of marble steps, striking her back on the edge of a step, and rolling down to the sidewalk. Although she walked a short distance afterwards, she complained of feeling very tremulous. The next day she appeared to be in her ordinary health. In the course of a week, however, she began to exhibit an unusual irritability of temper, and to complain of pain in the breast. This led her mother to seek my advice. Upon questioning her, I found that the pain in the "breast" had its seat at the epigastrium. This, with the history of the fall, induced me to examine the spine very carefully, but I could discover nothing abnormal in that region. I prescribed a stomachic, and directed that she should be carefully watched, and guarded from all violent exercise. At the end of a week I examined her again. The epigastric pains had in the mean time increased, and had become more paroxysmal in their character. She complained of fatigue after very slight exertion, and easily lost self-control, bursting into tears on very slight provocation. I now detected a deviation of the spinous process of the fifth dorsal vertebra to the left, but so slight that but for the previous examination I should have been inclined to consider that this was its normal position. Feeling, however, that it was my duty to give her the benefit of the doubt, I directed her to be placed upon her back, and kept her there for a month. In spite of this precaution, the symptoms all became aggravated. The attacks of gastralgia increased in frequency and intensity. Morning rigidity made its appearance, together with difficulty in flexing the spine, as in the effort to pick up any object from the floor. She also began to complain of weakness in the lower extremities, especially the right, and, when sitting on the edge of the bed, with the toes touching the floor, spasmodic contraction of the gastrocnemius of the same side caused a very noticeable quivering of the foot, thus indicating irritation of the spinal meninges. The appetite was capricious, sleep disturbed, and the spinal deviation

* Light oil of cloves is the best.

became more apparent. I now felt very sure that I had to deal with an acute inflammation of one or more of the vertebro-cartilaginous surfaces of contact, if not of a vertebral body itself, and that no time was to be lost. I accordingly applied a spinal splint, with the pads opposite the point of fancied deviation in the dorsal region, and removed the interdiction of the erect position and exercise. The effect of efficient support was little short of magical, and left no doubt in my mind as to the correctness of my diagnosis. Her languor and irritability vanished almost immediately. The gastric pains began to diminish in frequency and severity. She very soon dispensed voluntarily with the daily rest which I prescribed. Her appetite became regular, and in the course of three months there was not a symptom left to indicate the terrible malady which had threatened to cast a gloom over her entire life, if indeed it had not brought it to an early termination. As a matter of precaution, I insisted on her wearing the instrument until the end of the sixth month, and after that occasionally, when anticipating unusual fatigue. I think I am justified in saying that she never had a moment's serious inconvenience from its use. Her health has continued perfectly good ever since, and there is no sign of any spinal deviation from the normal line.

With this very gratifying result I desire to contrast the following.

Case II.—G. C., May 21, 1869, aged two and a half years, complexion fair, hair very light, eyes blue; resides in Reading, Pa. Introduced by his family physician. Family antecedents give no suspicion of strumous taint. Just one year ago, he had a severe fall down a flight of stone steps leading into an area in front of his father's house. This caused a temporary loss of consciousness, apparently of the nature of syncope rather than of concussion of the brain. In about a week's time he began to complain of gastralgia. The ordinary household remedies for "stomach-ache" being exhausted without procuring relief, a physician was consulted, who pronounced the child to be suffering from worms. The various anthelmintics, however, failed to remove the pain. As it became more severe, it gave rise to the suspicion that it might be inflammatory in its origin, having its seat somewhere in the alimentary canal; and a course of medication was instituted in that belief. This only aggravated the trouble. The little patient became emaciated, lost appetite, slept badly, and was evidently losing ground rapidly. Between two and three months since, it was noticed that he began to carry himself rigidly, and to lean a little towards one side, and soon after that he was losing strength in his lower extremities. This led his physician to make an examination of the spine, which resulted in the present consultation. Present condition: face pale; flesh soft and flabby; patient holds himself very stiffly, refusing to stoop to the floor; bends considerably towards the right side; strong contractions of the *psoas* muscles, producing considerable flexion of the trunk on the thighs in standing; occiput thrown backwards and downwards, tilting the chin up. From the sixth cervical vertebra the spine yields anteriorly to a slight extent, and bulges posteriorly in the lower dorsal and upper lumbar regions; feet both strongly inverted; can take but two or three steps without support, and only stands by leaning on his elbows; suffers intensely from paroxysms of gastralgia; and is very rigid when first aroused in the morning. His physician was disposed to locate the spinal affection—of the existence of which he was now convinced—in the dorsal region. I felt sure, however, that the long curve there noticed was simply due to the relaxed and partially paralyzed condition of the spinal muscles. The attitude of the child was extremely characteristic of disease in the cervical portion of the column; and the forward inclination in the lower part of this region, though slight, was quite sufficient to account for the symptoms; while at the same time there was a degree of distortion of the thorax anteriorly which could not have resulted from the deviation lower down. I accordingly, on the 26th of May, applied a splint designed to give support to the region designated. That night, for the first time since he began to suffer from the attacks of abdominal pain, he had a quiet night's sleep. He soon began to walk without assistance, and his general condition has improved very satisfactorily ever since. It is evident, however, that the destruc-

tive process in the vertebræ is not yet checked, as there has been an increase both of the spinal and the thoracic deformity which it has been utterly impossible to prevent. The best result that we can hope for in such a case is restoration to a fair degree of health, with diminished stature and very noticeable deformity,—a lifelong burden and sorrow.

In comparing these two cases, we notice, first, a similarity of accident, followed by, secondly, a train of symptoms almost identically the same. It is probable that a more careful and intelligent observation would have recognized the other essential signs in the second case much earlier than they were noticed by the child's mother; but the most important and striking symptom, that of paroxysmal gastric or abdominal pain, appeared in each at just the same interval after the accident. The accessory conditions were all rather in favor of Case II. The freedom from hereditary taint in his case, and its existence in the other; his residence in a small country town, in the midst of a range of hills celebrated for their salubrity,—hers in the heart of a large city: both of these circumstances should have told strongly in his behalf. *Early diagnosis* is the only factor to which we can trace the health and happiness which one of these children is to-day enjoying; while the failure to recognize the true character of his disease in its initial stage must be held responsible for the suffering and mortification, past, present, and prospective, which have fallen to the lot of the other. I know that physicians often shrink, from motives of kindness, from telling fond parents that there is reason to suspect that their little ones are the subjects of so terrible a disease, and prefer to wait until their suspicions are confirmed by actual ocular demonstration. But this surely is most mistaken kindness, and especially so in view of two important facts which render such cautiousness entirely unnecessary: first, that the affection, taken in its incipency, before any destruction of tissue has taken place, is, in the majority of cases, as thoroughly tractable as it proved in the first of the two just related; and secondly, that the mother, in nine cases out of ten, suspects, in a vague way, that the seat of the lingering malady is in the child's spine, before the idea occurs to the medical adviser, who too often commits the error of ridiculing her anxious fears, until the occurrence of deformity compels his acquiescence in the justice of her suspicions. I appeal confidently to every reader who has been in the active practice of medicine for the space of ten years to say whether he cannot recall at least one such passage in his professional experience.

1503 SPRUCE STREET.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF DR. JAMES H. HUTCHINSON.

Reported by Dr. GEORGE S. GERHARD.

GASTRIC ULCER—INFLAMMATORY ADHESIONS BETWEEN STOMACH AND SPLEEN.

BRIDGET McG., æt. 24, native of Ireland, was admitted September 4, 1871.

She stated that her family was healthy, and that she had always enjoyed good health until a year and a half before her admission to the hospital. At this time, after a day of hard work, but without previous warning, she vomited a large quantity of dark coagulated blood, which left her so prostrate that for four days her life was considered in danger. Four weeks after the occurrence of this hemorrhage she had so far regained her strength as to be enabled to resume her work, but she now began to suffer from symptoms of digestive derangement of a marked and persistent character. About eight months before her admission, pain became a prominent symptom; this was invariably referred to the left hypochondriacal

region, and was never relieved by hot drinks or pressure. The note taken on the 1st of November is as follows:

"Since her admission to the hospital the patient has been almost constantly in bed, and has suffered greatly from pain in the left hypochondrium. Her appetite has been good, but only the best food that the hospital affords has rested well upon her stomach. Vomiting has occurred occasionally, but the ejecta have at no time contained blood. Her tongue has usually been coated, and the bowels have been costive. The urine does not contain anything abnormal. The blood, when examined under the microscope, presents a normal relation between the red and white corpuscles. When firm pressure is made in the left hypochondriac region, an ill-defined resistant tumor can be felt; the impulse of the aorta is transmitted through the mass, but there is no murmur or thrill connected with it. There is an absence of dulness in the normal region of the spleen; in the left lumbar region posteriorly there is an abnormally extended area of dulness."

The patient's treatment for several weeks past has been essentially dietetic; she is now taking pepsin and small doses of the tincture of the chloride of iron.

November 11.—The patient still suffers from pain, but her other symptoms have improved.

December 5.—The patient now gets up for a short time every day. Her diet is now unrestricted.

January 3.—The patient is now well, and asked to be discharged to-day. The tumor can still be felt in the left hypochondrium.

The diagnosis in the case was at first difficult, but, from an attentive consideration of the past history of the patient, Dr. Hutchinson had little difficulty in deciding that the case had originally been one of gastric ulcer,—that this had given rise to a localized peritonitis which had resulted in an adhesion of the spleen to the stomach. The ill-defined tumor which was felt in the left hypochondrium was then the spleen somewhat displaced, and the attacks of pain from which the patient suffered so constantly were in all probability due to the interference with the movements of the stomach caused by the products of a previous inflammation. Attention was called by Dr. S. O. Hershon in the Guy's Hospital Reports, 3d Series, vol. xvi., to the fact that fixed abdominal pain is often dependent upon adhesions of an inflammatory character; and the case just reported presented many points of similarity to those described by him. There was every reason to believe that cicatrization of the gastric ulcer had taken place, for the pain was not increased after food, or by the ingestion of an irritant, and the emaciation, which was at first a very prominent feature of the case, yielded to the employment of nutritious food.

ERYSIPELAS IN A PARTURIENT WOMAN.

Mary W., an American, unmarried, was admitted November 12, 1871.

The patient stated that her health had generally been good. About a week before her admission to the hospital, she had a syncopal attack, followed by vomiting and a feeling of malaise. These symptoms, however, soon passed off, and she was quite well until four days afterwards, when she was seized with a violent burning pain in the left temple, followed by redness and swelling of the face in the left parotid region. The right side of the face became involved two days afterwards.

On admission, the patient presented well-marked symptoms of facial erysipelas. The greater part of the left side of her face was red and swollen, but on the right side the parotid region alone was involved. The edges of the red patches were elevated above the level of the healthy skin and abruptly defined. The constitutional disturbance, though marked, was not excessive.

The patient was about eight months gone in pregnancy. She stated that she had not had any symptoms of an approaching labor.

She was ordered twenty drops of tr. ferri chl. with a grain of quinine every three hours, and an appropriate diet.

Labor-pains began early on the following morning, and in a few hours after their commencement she was delivered of a small child. The labor was perfectly normal.

November 14.—The patient is doing well; her temperature

is $101\frac{1}{2}^{\circ}$ and her pulse 100. The after-pains are moderate; the lochia are scanty; the breasts are entirely devoid of secretion. The erysipelas has now extended to all parts of the face, with the exception of a space in which are included the upper and lower lips and the chin. The parotid and submaxillary glands are swollen.

November 16.—The patient had severe dorsal pains last night; they were, however, relieved by an opium suppository. She is delirious this morning, and states that everything appears of a green color. She has tinnitus aurium and some emotional disturbance. Her pupils are contracted. Her urine is heavily loaded with urates, but does not contain albumen.

November 17.—The patient talks somewhat at random to-day, but her vision is no longer disordered. The redness of the face is diminishing. Her temperature is 103° and her pulse 120. Her tongue is, as it has been throughout, furred. Her stomach is retentive. There is no abdominal tenderness. The lochia are still scanty. The mammary glands continue inactive.

November 18.—Her mind is perfectly clear to-day, and her temperature is normal. The redness of the face has almost entirely disappeared.

November 20.—The patient is very weak to-day, and her mind is somewhat excited. Her temperature is 99° and her pulse 76.

November 21.—All the symptoms of a fresh attack of erysipelas are present to-day. The blush is confined to the right side of the nose and the upper lid of the right eye.

November 22.—The patient's mind wanders to-day. The blush now involves the greater part of the face. There are no symptoms that cannot be ascribed to the erysipelas.

November 24.—The scalp is now tender to the touch, and pits on pressure. A.M.: temp., 99° ; pulse, 92. P.M.: temp., 104° ; pulse, 120.

November 26.—The patient is better to-day. A.M.: temp., 99° ; pulse, 116. P.M.: temp., 103° ; pulse, 100.

December 5.—She is out of bed to-day.

December 12.—There is a small patch of redness on the left side of the nose. The patient, however, feels well, and is without fever.

December 13.—The symptoms of another relapse are all present to-day. The patient's face is greatly swollen and very red. The eyes are completely closed. Temp., 104° ; pulse, 124.

December 15.—The symptoms are now subsiding; she is now able to open her eyes. Temp., 101° ; pulse, 100.

December 17.—The patient is now convalescent.

December 24.—She has been out of bed several days. She is taking a tonic, and is rapidly gaining strength.

December 31.—The patient was discharged to-day.

WILLS OPHTHALMIC HOSPITAL.

SERVICE OF GEORGE C. HARLAN, M.D.

Reported by CHARLES K. MILLS, M.D.

MUSCULAR ASTHENOPIA.

H. S., æt. 32, was a large, rather strong-looking man, but evidently "nervous." He said that his appetite was fair, but that he always had some gastric discomfort after meals. He also stated that he was easily exhausted, had palpitation of the heart after exertion, was subject to slight headache, and had occasionally some mental confusion. The action of the heart was found natural, and examination of the urine detected no albumen or other evidence of disease.

His eyes had been "weak" for three years, but since an attack of dysentery two years ago he had scarcely been able to read at all. When he attempted to do so, the letters in a few minutes became blurred and confused, "his eyes felt as if they would burst," and he had a throbbing headache and was troubled with dizziness. The same symptoms attended an effort to follow with the eyes the movements of any distant object, as a bird flying, or a ball thrown through the air. Looking out of the window of a railroad-car in motion had the same effect as reading fine print. A sudden and rapid move-

ment of the eyes sometimes almost caused him to fall. When one eye was covered and the axis of the other remained fixed, he could read without much difficulty, following the words on each line by moving the head; when the head was fixed and the eye moved, the same symptoms ensued as when he read with both eyes.

His distant vision was perfect, and there was no trouble when the eyes were at rest. $V = \frac{20}{XX}$, with either eye or with both. The accommodation in each eye was $\frac{1}{3}$, but when both eyes were used it was reduced to $\frac{1}{10}$, by the confusion resulting from the attempt at convergence.

A small object, as a pencil, approached slowly towards the eye, appeared double at eighteen inches. At one foot a prism of 15° , base inwards, was required to fuse the images, but it afforded no relief to the asthenopia. Tested with a distant light, a prism of 10° , with its base outwards, and one of 7° , with its base inwards, could be overcome; but a prism with its base upwards caused a crossed diplopia, which it required one of 5° , base inwards, to correct.

The refraction of both eyes was emmetropic, and the ophthalmoscopic appearances, except perhaps a slight hyperæmia, were normal.

Dr. Harlan considered the pathology of the case obscure, and the prognosis was therefore unfavorable. A course of quinine and iron and iodide of potassium was prescribed, and the patient was recommended to return to the country, where he had formerly lived.

TWO CASES OF WOUND OF THE EYEBALL.

H. V., æt. 18, a seamstress, while engaged at her work, struck her right eye with a needle, which rebounded and fell upon the floor. Examination showed that the needle had pierced the cornea, near its upper border, just within the vertical meridian, and had passed through the iris, and probably the capsule of the lens.

Immediately after the injury, the eye became injected and painful, and its vision was reduced to a bare perception of light. She was admitted to the hospital, after having been treated at home for a week with poultices, rose-water, and various domestic remedies,—the eye constantly getting worse. She complained that at intervals she had severe pain in and over the injured eye, which was very tender to the touch. The conjunctiva was moderately inflamed. No prolapse of the iris or iritis could be discovered. In the lens a commencing opacity was easily detected. No lens-matter had escaped into the anterior chamber. The vision of the uninjured eye was not affected.

Atropia was instilled, blood was taken from the right temple, anodynes were prescribed, and the patient put to bed and ordered to be kept quiet. In a few days the lens had become completely cataractous, and severe iritis with posterior synechiæ had ensued. Inflammatory products from the iris, gravitating to the bottom of the anterior chamber, had produced an extensive hypopyon. No swelling of the lens could be made out, and there was no evidence of intraocular tension.

Within a week, pain left the injured eye, but the other became sympathetically affected, the pain and irritation in it being so great that the question of the extirpation of the injured organ was seriously considered. The eye suffering from sympathetic ophthalmia became exceedingly intolerant of light, and both eyes were now treated with instillations of atropia three times daily. Anodynes, counter-irritation, and tonics were continuously employed. The patient remained in the hospital under this treatment, with rest and careful diet, for eleven weeks. When discharged, the inflammation of the injured eye had subsided, and the sympathetic trouble in the uninjured one was relieved.

E. C., æt. 29, a laborer, four days before admission to the hospital, was struck in the eye with a splinter of rock, which ruptured the cornea for a distance of about three lines from its lower outer margin; and into the opening thus produced the iris had prolapsed, carrying with it a little vitreous humor. Vision in the injured eye was $\frac{20}{L}$, and there was some conjunctivitis. Vision in the other eye was normal. No signs of sympathetic ophthalmia manifested themselves.

The protruding segment of iris was snipped off, and the remainder gently pushed back into position by means of a

blunt-pointed probe; after which an eight-grain solution of sulphate of atropia was instilled, and the patient put to bed, where he remained for several days. The use of atropia was continued daily. He was discharged at the end of three weeks, the inflammatory symptoms having subsided, the iris being without adhesions, and the pupil dilated, but regular and movable. He reported to the hospital clinic for a month after his discharge, when his vision in the affected eye had reached $\frac{20}{XX}$ nearly.

LACHRYMAL OBSTRUCTION FOLLOWING VARIOLOID.

M. McK., æt. 35, complained that the tears ran almost constantly over her right cheek. She had acute conjunctivitis of the right eye, with lachrymal obstruction. The left eye was unaffected. Four months previously she had the varioloid, before which time her eyes had never given her the slightest trouble. The right eye became inflamed during the attack of the disease, and she had suffered from pain, photophobia, and lachrymation ever since. Dr. Harlan slit up the canaliculus and introduced a medium-sized Bowman's probe into the lachrymal duct. The probing was repeated every other day while she remained under treatment. He also prescribed a weak solution of sulphate of zinc, which was instilled daily for a week. At the end of two weeks she was nearly well, but was directed to report occasionally.

ATROPHY OF THE CHOROID.

M. McF., æt. 11, was sent to the hospital from the Pennsylvania Institution for the Blind, to have the condition and prospects of her eyes investigated. Each eye appeared to be in nearly the same state,—for each, $V = \frac{20}{G}$; and she read No. 3 Snellen at $12''$, with difficulty. Her field of vision was remarkably contracted; it was nearly the same in all directions from the visual axis, its greatest diameter being three inches in the vertical and four in the horizontal meridian. She did not remember ever having had better sight. Ophthalmoscopic examination of each eye showed a slightly atrophied disk, diminished retinal vessels, and atrophy of the choroid. The pigment of the choroid had nearly all disappeared, and the vessels of that membrane could be seen distinctly ramifying through it, almost as well as in the eye of an albino. She was returned to the Blind Asylum, as there was no prospect of improvement, and she had not sight enough to enable her to receive an education in an ordinary school.

CEREBRAL AMAUROSIS.

E. H., æt. 17, a farmer's daughter, had good sight until three months before entering the hospital, when, on leaning forward for a few moments, suddenly everything became dark. For several months before this occurrence she had had occasional attacks of severe frontal neuralgia. She had suffered from obstinate constipation for more than a year, and for five years she had been troubled at irregular intervals with acute articular rheumatism. Her menses had always been regular.

She has one brother afflicted with hip disease, and one with phthisis. Her parents are living and healthy. No history of paralysis could be traced in her family.

Immediately after her loss of sight she had an attack of incomplete hemiplegia, involving the left side, slightly affecting its motion, and causing what she termed a "pins and needles" sensation, which at first reached from the left foot to the face, but which, when she came to the hospital, extended only to the knee.

She was not moody or dispirited, and her mind seemed clear. She experienced no tenderness of the spine on pressure. On closing her eyes in the dark, she had subjective impressions of flashes of light before the eyes,—the symptom known as phosphène or photopsia.

The girl was slightly stooped in figure. Her gait was staggering, with a tendency to lean towards the right side. She could stand alone on the right leg, but could not on the left.

She had slight external strabismus of the right eye. The internal rectus of this side was partially paralyzed; the other muscles were unaffected. Acuteness of vision in each eye equalled only $\frac{2}{CC}$, and her field of vision was much contracted.

The information obtained by the ophthalmoscope was

meagre and unsatisfactory. In the right eye, the fundus appeared normal; in the left, a slight striated opacity of the nerve-fibre layer of the retina was detected.

Her urine was tested and found normal. No signs of syphilis could be discovered, and no history of specific taint could be obtained.

The case was decided to be one of cerebral amaurosis, its exact nature unknown,—probably an effusion or morbid growth at the base of the brain.

She was ordered ten grains of iodide of potassium and one-sixteenth of a grain of the bichloride of mercury three times daily; she was placed upon a nourishing diet, and for the first ten days kept in a quiet, moderately-darkened room.

She remained in the hospital, gradually improving, for five weeks. When discharged, her gait was steady, and she could stand on either leg at pleasure. She had only a slight feeling of numbness in the left foot, and her vision equalled $\frac{18}{CC}$ in the right and $\frac{18}{L}$ in the left eye.

She was sent to her home in the country, with directions to continue the iodide of potassium and bichloride of mercury, and also to take in addition six grains of quinine daily.

MORPHIA AND CHLOROFORM.—M. Rabuteau, in the course of a communication to the French Academy of Science (*Bulletin Général de Thérapeutique*, May 15), says it is well known that the combined action of morphia and of chloroform will produce analgesia, without in all cases causing sleep. Moreover, a dog to which five centigrammes of narcea were administered hypodermically, and which was afterwards put under the influence of chloroform, was, upon awaking, found to be entirely deprived of sensation. It did not manifest the slightest pain when pinched or pricked, or when its feet were trodden upon, although it was able to walk and even to run about the laboratory. This extraordinary condition in which sensation was abolished continued for several hours. The same effects were produced, but in different degrees, by using bromoform or chloral with any of the other alkaloids of opium except narcotina. He says, further, that the alkaloids of opium may be classed, according to their effects upon man, as follows: As Narcotics—1, Morphia; 2, Narcea; 3, Codeia. The other alkaloids do not produce sleep. As Poisons—1, Morphia; 2, Codeia; 3, Thebaia; 4, Papaverine; 5, Narcea; 6, Narcotina. As Anodynes—1, Narcea; 2, Morphia; 3, Thebaia; 4, Papaverine; 5, Codeia. Narcotina has no power to relieve pain. Astringents—1, Morphia; 2, Narcea. The other alkaloids have no power to arrest diarrhoea.

THE PATHOGENESIS OF EXOPHTHALMIC GOITRE.—Boddaert (*Centralblatt*, May 11; extracted from the *Bulletin de la Société de Médecine de Gand*) found that he could cause exophthalmia in rabbits by ligating the external and internal jugular veins on both sides, and by dividing at the same time both the sympathetic nerves in the neck. The exophthalmia continued for several days, and until the collateral circulation had become established. In one case the cornea of a guinea-pig were observed, a quarter of an hour after the operation, to be three millimetres more prominent than before, and three-quarters of an hour later seven millimetres more prominent than normally. The prominence of the cornea could be made greater or less at pleasure, by changing the position of the animal, and thus increasing or diminishing the influence of gravity upon the circulation. The prominence became less marked upon compression or ligature of the carotids.

The ligation of the jugular veins without section of the sympathetic nerves produced only a slight prominence of the eyeball, which soon disappeared. The section of the sympathetics without ligature of the veins caused its retraction. An enlargement of the thyroid gland took place when Boddaert, in addition to the former operation, tied the inferior thyroid veins.

Boddaert is hence inclined to believe that Basedow's or Graves's disease is primarily due to a paralysis of the cervical sympathetic, which causes an increased frequency of the pulsations of the heart. This in its turn prevents the veins from being duly emptied during the diastole, and consequently gives rise to venous congestion, which may often be demonstrated to exist in this disease.

APPARENT DEATH AND ITS DETECTION.—Dr. M. Rosenthal has found (*Wiener Medizinische Presse*, May 5 and 12) that the susceptibility of the muscles to the faradaic current persists from one and a half hours to three hours after death, and is then extinguished. It continues longer in individuals who have died of acute affections than in those who have succumbed to chronic diseases. In a case of apparent death, he was able to demonstrate, by showing that the muscles still responded to the interrupted current, that life was not extinct, although death from convulsions (hysterical) was supposed to have taken place thirty-six hours before. He concludes, therefore, that the electrical current renders the diagnosis of death possible even before the occurrence of rigor mortis, and may be looked upon in cases of apparent death as the most reliable and delicate test of the irritability of the muscles and nerves.

THE BEST POSITION FOR THE REDUCTION OF STRANGULATED HERNIA.—Dr. Simorre recommends (*L'Abeille Médicale*, May 27, 1872) that in the reduction of a strangulated hernia the patient should be placed in the following position: A mattress having been doubled on itself, the patient is placed upon the inclined plane which results, in such a manner that his buttocks will rest on the most elevated part, and the front of the vertebral column, which corresponds to the epigastrium, upon the lowest part. His head and chest are supported by a bolster, and should be higher than the epigastrium, so that the muscles of the front of the neck, and of the chest and abdomen, shall be in a condition of extreme relaxation. The space at the foot of the bed made vacant by the doubling of the mattress should be filled up, so that the patient's feet may have a suitable support. He says that since he has had recourse to this method, in no instance has a strangulated intestine resisted his efforts at reduction.

THE REDUCTION OF HERNIA BY M. POTAIN'S ASPIRATEUR.—M. Demarquay (*L'Abeille Médicale*, May 27, 1872) exhibited at a recent meeting of the Academy of Medicine of Paris, a young man, twenty-one years of age, in whom he had reduced, only four days before, an umbilical hernia, after having removed by suction the liquids and gases contained in the strangulated fold of intestine.

After several efforts at taxis, a trocar was placed in the centre of the tumor, and—thanks to M. Potain's *aspirateur*—the liquids in the intestine flowed into the vessel which was intended to receive them. One hundred and twenty grammes of liquid, without counting the gas, were removed in this way. The tumor collapsed immediately; and it sufficed to press from below upwards to feel the intestine re-enter the abdominal cavity.

THE NATURE OF BLOOD-GLOBULES.—MM. Bechamp and D'Estor (*L'Abeille Médicale*, May 27, 1872), in a note to the Académie des Sciences of Paris, announce the following conclusions:

1. The corpuscles of mammals are small homogeneous masses protected by an envelope.
2. Thrown into dilute alcohol, they lose their hæmatoglobulin by exosmosis, and this becoming free is precipitated in the form of granulations, associated with the remains of the corpuscles from which they have been derived.
3. The granulations obtained in this way have no power to form cells, no matter how long they may be kept in alcohol at 45° C.

A LESION INVOLVING BROCA'S CONVOLUTION WITHOUT APHASIA.—Dr. J. Batty Tuke and Mr. John Fraser report, in the April number of *The Journal of Mental Science*, a case in which, after the death of the patient, a lesion was found which had destroyed posteriorly the superior fourth of the ascending parietal convolution, leaving a small portion of the knuckle in which the gyrus ends, the inferior third of the ascending frontal, the inferior margin of the second frontal, and the posterior half of the third frontal convolution. Notwithstanding the implication of Broca's convolution, the only defect in language was partial verbal amnesia.

ARREST OF EPISTAXIS.—M. le Docteur Marin, of Geneva, recommends, for the arrest of epistaxis (*Journal de Méd. et de Chir. pratique*, May, 1872), the compression of the facial artery as it runs over the superior maxillary bone near the nose.

PHILADELPHIA MEDICAL TIMES.

A SEMI-MONTHLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

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EDITORIAL.

DR. HUTCHINSON having resigned the editorship of this journal, his official connection with it will be dissolved after the issue of the current number.

SUNSTROKE.

THE current number of *Lippincott's Magazine* contains an article on this subject, from the pen of one of our most valued contributors, Dr. Horatio C. Wood, Jr., which is generally understood to be an abstract of the essay that gained for its author the "Boylston Prize" this year.

After passing in review a portion of the literature of the subject, the writer proceeds to discuss the various theories which have prevailed in regard to the pathology of sunstroke. The theory which he first adopted, that the symptoms of the disease depended upon an alteration of the blood, he considers to be no longer tenable. Referring to some experiments of Dr. R. Cresson Stiles, which were published in *The Boston Medical and Surgical Journal* for June, 1864, and in which it was shown that the blood of an animal that had died of sunstroke might be injected with impunity into the veins of another animal, he rightly conjectures that the symptoms do not arise from the development of a poison in the blood. He also proves that there is no loss of vitality either of the red or of the white blood-corpuscles; for the blood in sunstroke, although dark in color, becomes of a bright arterial hue when shaken with oxygen, which would not of course be the case if the red corpuscles were dead. The amœboid movements of the white corpuscles are, moreover, found to be exceedingly active in blood which has been gently heated. The proof appears then complete, he says, that the changes in the blood which undoubtedly occur in protracted cases of the disorder are secondary, not primary. The next step in his investigations was directed towards ascertaining what it is in sunstroke that kills, and why the heart and muscles are found so rigid after death. Subjecting myosine to different temperatures, he found that coagulation came on with great rapidity when the temperature was raised to 108° Fahrenheit, and that it occurred immediately at 115°. If a piece of muscle while yet limp and uncontracted be exposed to a moderate warmth, the post-mortem rigidity comes on

much more quickly than when it is cooled. If a temperature of 110° be reached, the stiffening comes on in a very few minutes; at 115° immediately. These facts show very plainly the cause of the rapid appearance of the post-mortem rigidity in sunstroke; for in this disease the temperature of the body at the time of death is frequently above 110° Fahrenheit. It seemed, Dr. Wood goes on to say, a probable conclusion from these facts that the cause of death is coagulation of the myosine of the heart-muscle and consequent arrest of its action. But on opening the thorax of insensible animals when breathing had ceased, and when, therefore, the ordinary external appearances of death were presented, he found that the heart habitually continued to beat for a greater or less length of time after the arrest of respiration. The fact was thus established that in ordinary sunstroke death is brought about not through the arrested action of the heart, but by the failure of the respiration, and that the peculiar hardening of the heart takes place *after*, not *before*, death. This arrest of respiration Dr. Wood, in common with the older observers, believes to be of nervous origin.

The next step in the inquiry was directed towards the determination of what it is in sunstroke which so fatally oppresses the nervous system. As the agent is not in the blood, the probabilities appeared to Dr. Wood to be in favor of its being the heat itself. He shows by the following experiment that the nerves will bear, without injury, a temperature far above that which is reached in sunstroke. In an animal placed and kept profoundly under the influence of chloroform, the sciatic nerve was exposed, and so arranged that a stream of water of known temperature could be caused to run over it. By means of a galvanic battery the nerve was excited from time to time above the heated portion, and the conducting power of the latter thereby tested.

"The inquiry was," he says, "thus narrowed down to the nerve-centres, to which, consequently, the investigation was directed. A hog's bladder was fitted like a bonnet over the head of an animal, with tubing so arranged that hot water could be made to circulate through the bladder. It was found when an animal was so treated that *sudden insensibility, stupor with or without convulsions, and finally death from asphyxia, were induced*. As soon as death occurred, the head of the animal was opened and the bulb of a thermometer was plunged into the brain. It was thus ascertained that a brain-temperature of from 112° to 114° was fatal to a cat, and one of 114° to 117° to a rabbit."

The brain of man being more highly organized and more active than that of a lower animal, it is probable that a less degree of heat will produce in man the same set of symptoms. The mechanism of an attack of sunstroke Dr. Wood explains as follows:

"Under the influence of external heat the temperature of the body rises until at last a point is reached at which the heat paralyzes, by over-stimulation, this controlling centre (regulating animal heat); then a sudden additional rise of temperature, with a corresponding increase in the severity of the symptoms, occurs."

Holding this view of the pathology of sunstroke, Dr. Wood very naturally recommends the plan of treatment which is now almost universally employed by intelligent physicians, and which consists simply in the external application of cold water, both as a curative and a prophylactic remedy.

We have thus laid before our readers the principal points of this really admirable paper, which presents us with a fair résumé of what is known of the subject of which it treats, and with the results of some new experiments upon animals.

Although the article is a popular one, intended only for general readers, we think Dr. Wood would have done well to have mentioned the names of those who originated some of the experiments upon which he bases his conclusions.

We are rather surprised to find the author asserting that the theory which makes the symptoms of sunstroke depend upon an alteration of the blood was originally suggested by himself. This theory prevailed long before the appearance of Dr. Wood's paper on this subject, in 1863, and may be found alluded to by the late Dr. William Pepper, in some remarks made at the College of Physicians of Philadelphia, and reported in the *American Journal of the Medical Sciences* for 1851. It is also very fully discussed in a communication made to the same journal in 1859 by Dr. James J. Leveck, who was so struck with the resemblance of sunstroke to typhus fever, that he proposes the name of "heat-fever" for it, and has given in his paper a table illustrating the comparative symptoms of the two diseases. He, moreover, recognized the fact that the changes in the blood were secondary and not primary.

Dr. Wood is disposed, we think, to attribute too large a share of praise to the experimental physiologist, in conducting us to a rational, scientific treatment. While fully sympathizing with him in his denunciation of the unreasoning sentimentalism which has rendered vivisection almost impossible in this city, and appreciating the fact that we are largely indebted to it for our knowledge of physiology, and to a certain extent also of pathology, we would remind him that it is dangerous to attempt to prove too much in support of a mooted question. Considering that the external application of cold water, or, what is even more efficacious as a refrigerating agent, ice, in the treatment of sunstroke, has been practised in this city for more than ten years, and that the cold douche has been long recommended by Indian physicians, it sounds rather oddly to hear that the *bedside* physician (by which term we suppose Dr. Wood designates a physician who is not a vivisector), being still utterly at sea as to the nature of the malady, is equally so as to what ought to be done for the patient's relief. Do we really owe to the experiments detailed in this paper the knowledge that the overheated body in sunstroke and fever is most readily cooled by its immersion in cold water, and that this constitutes the most rational as well as the most efficient plan of treatment in the former and very probably in the latter condition?

OUR DIRTY STREETS.

WE felt it to be our duty to comment in a former number of our journal upon the culpable neglect of the Board of Health of this city to adopt last winter, during the prevalence of the epidemic of smallpox, the proper measures to restrain its virulence. At the present time, it seems quite as difficult as then to arouse it from its inertness. Although the summer and its accompanying heat are already full upon us, and there is at least reasonable ground for fear, judging from the history of the disease in former years, that cholera may visit our shores during the next few months, no precautions seem as yet to be taken to protect us from its ravages. There are many parts of the city where a scavenger has not been seen for months, and there is no part of it, except where the work is done by private contract, which is more than moderately clean. When the city was fortunate enough to get rid of the Sewage Utilization Company, it was generally understood, if there was not a direct promise on the part of the Board of Health to that effect, that the streets of the city should be put in thorough order so far as cleanliness was concerned; but this promise has, to say the least, been most inefficiently carried out.

A sub-committee of the Citizens' Municipal Reform Association have recently called the attention of the Board of Health to the negligence of the contractors for cleaning the streets; but, in spite of the fact that this must be as patent to the members of that body as to every private citizen, they seem indisposed to act, and have contented themselves with adopting a resolution in which the Citizens' Municipal Reform Association were requested to forward to the Board all well-authenticated and definite complaints of neglect on the part of the street-cleaning contractors. It strikes us that this is shirking a responsibility which of right belongs to them. If they have the power to make contracts, the community certainly expects that they will see that these contracts are faithfully executed. If there is anything wanting in our city ordinances to give them full control over the contractors, it behoves them to bring this to the notice of the Councils of the city, or to that of the Legislature of the State, in such a way that the deficiency may be supplied.

We are glad, however, to see by the daily newspapers that the committee of the Reform Association have done the best they could under the circumstances, and have sent in to the Board a long list of complaints, to which, it is to be hoped, it will give immediate attention.

LIQUID NITROUS OXIDE.

OWING to the politeness of Prof. J. H. McQuillen, of the Philadelphia Dental College, we were afforded an opportunity of examining the apparatus for holding liquid nitrous oxide lately patented by Johnston Bros., of New York. This consists of an iron cylinder, twelve and a half inches long by three inches in diameter, into which one hundred gallons of the gas are forced by

compression. A morocco case is made to contain the cylinder and to protect the delicate valve with which it is provided from injury. When wanted for use, the gas is drawn off into an india-rubber bag capable of holding about four gallons, and provided with an inhaler, all of which is contained in the same case as the cylinder.

The advantages claimed for this method of using the gas are the facility with which large quantities of it can be transported, the greater purity of the liquid nitrous oxide as compared with that of the gas made by or furnished to dentists, and the consequent less risk in its administration. We learn that during the performance of the operation of ovariectomy recently in New York by Dr. J. Marion Sims, the patient was kept under the influence of this anæsthetic for one hour and a half.

CORRESPONDENCE.

OPHTHALMOLOGY ABROAD.

(Continued.)

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

I HAD wished to visit all the eye-clinics of London, with a view to compare their respective merits; but the loss of time incurred in spanning the great distances that frequently separate hospitals from one another, together with the fact that too often the hours of lecturing at one school conflict with those at another, had a great effect in preventing me from wandering much, and in keeping my attention pretty exclusively confined to Moorfields. This I thought at the time judicious, and my opinion was confirmed by what I afterwards saw. The above reasons prevented me from seeing Dr. Hughlings Jackson,—to whom Mr. Couper gave me a card,—Mr. Haynes Walton, of St. Mary's,—to whom I had a letter of introduction,—Mr. Carter, of St. George's Hospital, and Mr. Power, of St. Bartholomew's. After seeing the eye-surgery of St. Thomas' and Guy's Hospitals, I felt that I had spent as much time as I could afford in excursions from what I considered my legitimate work. I had met Mr. Bader in a London house, and he had given me a pressing invitation to visit his clinic,—especially to show me his operation for conical cornea. His operating hour is half-past one o'clock on Mondays. Punctually at that hour he came into the operating-room, which is in one of the new pavilions on the ground floor, well lighted by skylights from above. Mr. Bader is a very rapid, adroit operator: in two hours he must have done twelve or fifteen operations. I was told that he had done thirty at one sitting. Bichloride of methylene was the anæsthetic used. He has no less than fifty-five beds at his disposal. Iridectomy downwards and outwards for glaucoma was recommended since, as he alleges, that portion of the retina is the last affected. In a case of recurrent glaucomatous tension, where Mr. Bowman had operated on the other eye by an upward iridectomy, he made an incision in the centre of the cornea, introduced Liebreich's forceps, and, passing them quite over to the periphery of the iris, seized it, and, pulling slowly upon it, brought it all away. This was repeated in the other eye. This was his method of dealing with cases where iridectomy failed to relieve tension. Several cases of convergent strabismus were treated by the subcutaneous method of operation. Among the operations done to-day were almost all familiar to ophthalmic surgeons.

Mr. Bader is a slender, graceful gentleman, of English appearance, but having a slightly-foreign accent. He is a German, but left that country during the revolution of 1848. A microscope was on a table near at hand, which he took occasion to use in showing a cretaceous lens to the students. In treating strictures of the nasal duct he does not use probes, but prefers to slit the canaliculus and afterwards to inject water through the duct. In cases where he had occasion to destroy the lachrymal sac, the galvano-caustic apparatus was used. For fixation of the eye, he used a pair of forceps of his own invention: they had sharp points with which to take hold of the sclerotic, thus obviating giving way or stretching of the conjunctiva. I could not see that their advantages counterbalanced the possibility that in certain cases the little punctured wound might give rise to trouble.

At Guy's Hospital, the impression made upon me was unfavorable: there seemed to be a striving after strong effects, that was not agreeable to witness.

At the new St. Thomas' Hospital,—one of the largest and most imposing of the London hospitals,—Mr. Richard Liebreich has charge of the ophthalmic department. Out-patients are seen every day, at two P.M.,—Thursday at three P.M. being the time for operations. Mr. Liebreich, formerly oculist to the French imperial family, left Paris during the war, and, being called to the chair of ophthalmology at St. Thomas', has settled permanently in London. I presented a letter of introduction from Dr. Knapp, of New York, and was treated with great courtesy. Mr. Liebreich is a pale, unhealthy-looking man, of apparently thirty-five years of age, with long black hair, mustache, and beard. He speaks English with a little effort, but he has very little hesitation in lecturing. His clinic is quite small, as it has only been organized during the last two months.* On the walls of the clinic-room were the chromo-lithographs so familiar to us from his Atlas, framed and glazed, for reference to by the students. The ophthalmoscope-room was not nearly so large as that at Moorfields, having only three burners fitted; the walls were blackened, and the entrance was still further protected from light by double black worsted curtains. The operating-theatre here pleased me more than any I had yet seen. One improvement, that struck me as being a decided one, was that the platforms on which the spectators stood were movable, and could be shifted so as to secure the best light,—an object that has to be considered in the London winter.

Mr. Liebreich did two of his new extraction-operations. He used no anæsthetic, no speculum, no assistant to hold the upper lid, nor any fixation-forceps; and all his instruments for the operation were contained in one handle. At one end was the narrow Graefe knife, at the other the David spoon, whilst the cystotome, by means of a button, could be protruded or retracted at pleasure. He stated that his object was to reduce the operation to the simplest possible detail. His hand is so tremulous that it is almost painful to see him operate; and yet he operates well; for certainly his results, as I saw them, were admirable.

Having seen the principal English ophthalmologists, my desire was to see their distinguished German confrères. Graefe was gone, and Schweigger I did not especially care to see: so I concluded to turn my steps to Vienna instead of Berlin. I went by way of Paris, and there called upon M. Wecker, at No. 7 Avenue d'Antin, Champs Elysées. He

* This was written in November, 1871.

was very kind and polite, and, learning that I was on my way to Vienna, was good enough to offer me letters of introduction to Professors Arlt and Jaeger. I already had a letter to Prof. Arlt, but was happy to receive one to Prof. Jaeger. M. Louis de Wecker lives in elegant apartments, containing a number of fine paintings by Van Dyke. In person he is small, of compact figure, of the blonde German type, with hair slightly tinged with gray. He appeared to be about forty-five years of age. He spoke of his operation for tattooing the cornea with India ink in cases of irremediable opacity, merely to conceal the deformity, and said that he had sent a communication to Knapp's Journal, in New York, describing it. He invited me to be present at his clinic on the following day at two o'clock, to see the operation. This is held at No. 55 Rue Cherche Midi, on the other side of the Seine. The house stands back from the street, is approached through a court-yard, and appears to have been a stately mansion in its day. An Austrian flag (M. Wecker's nationality) from one of the upper windows spoke of the trials of the siege. The doctor not arriving at the hour appointed, I had time to look about me. There was a large waiting-room for patients, and a handsomely-decorated consulting and ophthalmoscope-room. The greater part of one wall was occupied with framed pictures from Liebreich's and Jaeger's Atlases. Of the latter, M. Wecker has lately published a French translation. The test-types used were those of Snellen and Giraud Teulon. A light circular blackboard was used for determining the extent of the field of vision. Coccius' ophthalmoscope is preferred to others. In the clinic, the usual average of corneal and conjunctival inflammations was to be seen. In chronic granular conjunctivitis, a favorite application was one of equal parts of lead-water and water. For phlyctenular conjunctivitis, Pagenstecher's ointment of the amorphous yellow oxide of mercury was mostly relied upon. He was careful to make each application himself, sitting down with an apron over his knees, and seeming to be very careful and painstaking. The assistant or nurse in the operating-room here, as at Moorfields and Guy's, was a woman. For the operation of tattooing the cornea, a little girl of eight years was brought in with a dense leucoma of the whole of the left cornea. A portion of India ink was rubbed upon a plate, and the surgeon, using a narrow grooved needle, dipped it in the pigment, and pricked the latter into the cornea by a series of little punctures as close as possible to each other. The process is exactly the same as that by which sailors tattoo their bodies; and at a little distance the eye presents a general dark appearance instead of the glaring deformity of the previous opacity. The pain of the operation was stated not to last more than half an hour, and the patients could attend to their occupations immediately after it was over. Owing to the bad weather, the clinic was not so well attended as at other seasons of the year. M. Wecker showed me an ophthalmoscope of his invention for the purpose of exhibiting the fundus oculi to two observers at the same time. This is done by means of a plano-convex lens fastened to two rectangular prisms. An observer looks through the mirror in front, a second through the convex lens at right angles to the prisms. I tested the apparatus, and it was satisfactory; the only objection that I saw to it in practice was that it took a long while to get the focus properly placed. For fuller details of the instrument than my limits permit me to give, I would refer the reader to an abstract in the Ophthalmic Hospital Reports for November, 1871.

From Paris I went to Vienna; and among the first objects that I sought in that beautiful city was the General Hospital. A friend living in Vienna made an appointment for me to meet Prof. Arlt at ten o'clock the morning after my arrival. As I went alone, I had some difficulty in finding his clinic, especially as my cabman appeared never to have been in the hospital court-yard before. The General Hospital is an immense series of buildings around nine hollow squares; and Arlt's clinic is at the end of one of the most distant. He did not arrive until half-past ten o'clock. He does not speak English, but his son, and Dr. Schulek, his assistant, both do. Prof. Iwanhoff, of Kiev, well known as a writer upon ophthalmology,—a thin, pale young man in spectacles,—was present as a visitor. Prof. Arlt is a very homely man, of about sixty years of age, very like his photographs, of plain, earnest manners that impress one strongly as to his thorough honesty, and, like the majority of the German professors, exceedingly careless of his personal appearance. In going around the wards he was very minute and particular in his explanations to the students. He performed iridectomy for ectasia of the cornea, making the incision with a keratome, and seizing the iris with a small forceps like Fischer's iris-forceps. He makes it a rule always to bandage one eye while he operates upon the other. For dressing afterwards, he uses charpie and a flannel bandage. We went from bed to bed in the ward, and the Professor called up cases of interest and made remarks upon them. Phlyctenular conjunctivitis, or corneitis, is a term that he does not allow. He calls the disease "corneitis lymphatica." Where corneal ulcers exist, he uses atropia solution; and where they are not present, the insufflation of calomel. After passing through the wards, he enters a prescribing-room for out-patients and seats himself at a little table. Circular benches at graduated heights surround him for students. He announces aloud his diagnosis and the treatment to be pursued, and makes such remarks as he may judge proper upon the disease, while a clerk at his side makes the necessary registry of the case. Ophthalmoscopic cases he refers to his son and Dr. Schulek for examination.

I also paid several visits to Prof. Edward Jaeger's clinic. He lectures very colloquially, with the students gathered around him on chairs. The hour is from eight to ten daily. His course is not so crowded as Arlt's, as it is not incumbent upon candidates for the doctorate to take it; but it is attended by medical men from foreign countries, and altogether a higher class of students. Dr. Schnable, his assistant, has charge of instruction in ophthalmoscopy. There must have been at least fifteen burners fitted in the room, and the supply of material was abundant. Jaeger's weak-light mirror was used exclusively. Dr. Schnable disapproved of the bright light of my Loring ophthalmoscope. He admired its workmanship very much, but objected very decidedly to its cost, stating that it could be made in Berlin for ten dollars. On showing it to Leiter, a prominent Vienna instrument-maker, I found that it was evidently a novelty to him, and he desired to have it for a few days as a model.

Before leaving Vienna, I paid a visit to Stellwag's clinic. This is held at the Josephinum, the school for military surgeons. Here the students were in uniform, and wore side-arms. Stellwag sat with his patients behind a railed enclosure, in front of which was the large class. Although he is so well known at home through his book, I found that very few of my countrymen here had heard him. This comparative iso-

lation strikes one as very curious when met with for the first time. You will constantly hear the old students in Vienna say that they have not heard a well-known man; and in explanation you are told that each day has its duty in the special course of study being pursued, and that they do not feel disposed for mere sight-seeing; or they postpone the visit until the eve of departure, when it will probably not be made.

London, under certain circumstances, may be a better school for the study of ophthalmology than Vienna. This will be the case where the sojourn abroad is to be limited, and where the student is ignorant of German. In London he would have the large field of Moorfields open to him, and the advantage of following the sagacious practitioners and admirable operators of that house, whilst he would find the German school well represented in Mr. Liebreich. But if the student is a good German scholar—or, if not, has time at his disposal to make himself such—he had better go at once to Vienna. There teaching, both theoretical and practical, is carried to admirable perfection, and the student enjoys the great advantage of having all his clinical opportunities at hand, and is not obliged to go to and from distant hospitals.

In England, as with us, teaching is too apt to be but a step to something else, to be relinquished when that something considered more desirable is attained. In Germany it is looked upon as the business of a man's life: he begins as a teacher and he expects to end as a teacher, and as a consequence the instruction is more painstaking and more thorough.

Very respectfully yours,

A. D. HALL, M.D.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, MAY 23, 1872.

PRESIDENT DR. J. H. HUTCHINSON in the chair.

DR. JOHN H. PACKARD presented a specimen of *epithelioma of the epiglottis*.

Mr. H. P., æt. 76, a truck-farmer, and a very hale man, thought he caught cold in October, 1871, and suffered all winter from sore throat.

Dr. P. saw him first on the 27th of February, 1872. He was very much emaciated, and almost unable to swallow; but his voice was only slightly affected, and nothing could be seen in the fauces except slight congestion. On either side of the neck an enlarged and tender lymphatic gland existed. No laryngoscopic examination was practicable.

He had occasional bloody sputa, and a constant and copious discharge of very offensive thick mucus. His breath was extremely fetid.

Almost the only treatment available was the use of detergent gargles.

He died, worn out, on the 29th of April.

A post-mortem examination of the neck and chest showed a growth about as large as a walnut, occupying the place of the epiglottis.

No other disease was detected, except deposits (probably secondary?) in the cervical lymphatic glands.

Owing no doubt to the slowness of his death, a very large pale clot branched from the heart along all the larger blood-vessels as far as they could be traced.

Dr. R. M. BERTOLET said that the starting-point of many of these growths was the epiglottis itself. Various plans for their removal have been suggested, but there is always difficulty, owing to the depth at which they are seated. Several cases have been successfully operated upon for the time being by the galvano-cautery. The trouble after these operations is

the extensive ulcerative surface which remains behind, which, however, is not greater than is frequently met with in syphilis and phthisis, and the chances for prolonging the patient's life are increased by the operation. Dr. B. recollected a case where a secondary deposit occurred in the lung. Frequently the disease extends down the aryteno-epiglottidean folds, and often sudden death supervenes from oedema or occlusion, in consequence of neglect of the physician. These cases should be watched with great care, for in many instances life may be preserved by laryngotomy. Again, as the majority of cases extend from the epiglottis to the aryteno-epiglottidean folds, the operation by galvano-cautery should be done early.

Czerny has proposed the removal of the larynx entire in these cases. He has experimented upon dogs and kept them alive for two or three weeks without a larynx, nourishing them by means of a catheter.

Prof. Billroth alone has attempted this operation on the human subject in two cases, excising great portions of the larynx; but both patients died almost immediately after the operation.

Dr. JOHN ASHHURST, Jr., believed the best procedure in cases of tumor of the epiglottis admitting of operative interference, and not admitting of laryngoscopic treatment, to be that described by Malgaigne under the name of *sub-hyoidean laryngotomy*, and recently revived by Langenbeck under the name of *sub-hyoidean pharyngotomy*. This consists essentially in a preliminary tracheotomy, and a subsequent transverse incision below the hyoid bone, dividing the sterno-hyoid and omo-hyoid muscles, and opening the thyro-hyoid membrane and the mucous membrane of the pharynx. The tumor, being thus fairly exposed, can be removed in whatever way may be thought best, the flow of blood into the air-passages being prevented by plugging the glottis, while respiration is carried on through a tube introduced by the tracheal wound. These operations are chiefly adapted to cases of non-malignant tumor, complete extirpation in the case of a malignant growth being rarely practicable, while a partial removal would be worse than useless. In the present instance (one of malignant growth) the fatal issue appears to have been due to gradual exhaustion, without any interference with respiration or other symptom directly referable to the presence of the tumor. Hence an operation was not called for, and indeed would have been contraindicated by the advanced age of the patient.

REVIEWS AND BOOK NOTICES.

INJURIES OF NERVES AND THEIR CONSEQUENCES. By S. WEIR MITCHELL, M.D., Member of the National Academy of Sciences, etc. 8vo, pp. 377. Philadelphia, J. B. Lippincott & Co., 1872.

The author of this handsome volume has had unsurpassed if not unequalled opportunities for the study of injuries of nerves, and, it is but just to add, has, in the pages before us, amply proved his ability and willingness to utilize those opportunities, and to render available to his professional brethren the rich fruits of his large experience.

In the early part of the year 1863, Dr. Mitchell was placed at the head of a military hospital specially organized for the treatment of lesions of the nervous system, and, having been wisely relieved from the administrative duties which under ordinary circumstances necessarily occupy so large a portion of an army surgeon's time, was enabled to give his whole attention to the professional care of the patients under his charge, and to the scientific investigation of their cases, and, with his able colleagues Drs. George R. Morehouse and Wm. W. Keen, quickly justified the wisdom of the course which had been pursued, by the preparation of a report upon Reflex Paralysis, which was issued as a circular by the Surgeon-General's Office in March, 1864, and by the subsequent publication of a small volume on "Gunshot Wounds and Other Injuries of Nerves," in the autumn of the same year.

This book has been long out of print; and as Dr. Mitchell's later contributions to the subject of nerve-injuries, in the reports of the U. S. Sanitary Commission and elsewhere, are somewhat scattered, and more or less difficult of access, he

has, we think, done wisely in bringing together in the present volume the most important parts of what he has already published, together with much new matter, and thus furnishing a more complete treatise on the subject than has hitherto existed in our own if not in any language, and one which we do not hesitate to declare will at once be received as authoritative, and will ever remain a lasting monument of its author's industry and ability.

The limited space at our command will not admit of our going over this volume, as we should like to, page by page and chapter by chapter, analyzing the facts presented by the distinguished author, and discussing his arguments; and we must therefore be content to indicate the general plan of the work, and to invite our readers' attention to one or two points which, in our study of its pages, have seemed to us particularly worthy of notice.

The whole work is divided into fourteen chapters, of which the first is purely introductory; the second and third are respectively devoted to the anatomy of nerves and to the subject of neuro-physiology, the fourth to the physiological pathology of nerve-lesions, and the fifth to a consideration of the varieties of mechanical injury to which nerves are subjected; in the sixth, seventh, and eighth chapters are discussed the symptoms of nerve-injuries—the early and later symptoms and sensory lesions being successively considered; in the ninth chapter, the diagnosis and prognosis of nerve-injuries; and in the tenth, eleventh, and twelfth, the important subject of treatment. The last two chapters are respectively devoted to a consideration of the lesions of special nerves and the neural maladies of stumps.

One of the many interesting questions touched upon by Dr. Mitchell is that of the pathology of tetanus:

"There is a prevalent belief," he says, "that tetanus is more apt to arise when large nerves are slightly hurt than on other occasions; but although there are on record many cases where this terrible malady has followed the inclusion of nerves in ligatures, in the mass of tetanic histories the casual irritation has arisen in the extreme distribution of nerves, and where there has been no proof of precedent injury to large trunks. . . . In two hundred recorded instances of wounds of great nerves which passed under my eye during the war, not a single case of lockjaw was seen. . . . In fact, the tendency towards irritation, resulting in spasm, seems to increase as the nerves divide and approach the skin. Brown-Séquard succeeded once in causing tetanus by leaving a rusty tack in the foot of an animal. I have never been able to get this result by any method, nor in some seventy sections of [*Qu.*, or] wounds of nerves in animals have I ever encountered it."

Are we mistaken in thinking that this significant record of experience tends indirectly to favor the view advanced by Richardson, that tetanus is primarily not a disease of the nervous system but of the blood?

The practical surgeon will turn with special interest to the author's arguments in favor of the employment of sutures in cases of completely severed nerves. Although the notion that the use of a suture may permit primary union of a divided nerve is certainly incorrect, there is, according to Dr. Mitchell, reason to believe that it will hasten the return of healthy function, and (which is even more important) that it will not in itself entail any additional risk upon the patient. Hence Dr. M. concludes that there is "justification for the employment of sutures in any nerve-wound, and especially where there has been loss of substance, as after removal of a neuroma."

Various modes of applying nerve sutures have been recommended: thus, Nélaton, we are told, employed a fine silver wire, passed through the two extremities of the nerve so as to bring its cut surfaces into accurate apposition, the wire being then secured by drawing its ends through a delicate tube which was allowed to project from the wound. Vulpian (in animals) makes use of a single linen thread, passed through the cut ends of the nerve; while Dr. Mitchell himself has employed one or more threads, passed through the loose tissue connected with the sheath of the nerve, rather than through the nerve itself.

It occurs to us, from a theoretical consideration of the subject, that a better plan than any of these would be to use a

fine pin or needle and delicate wire loop, much in the way that has been recently suggested by Mr. Mason, of St. Thomas' Hospital, for the treatment of ununited fracture.

Dr. Mitchell's volume is very handsomely printed, and its general appearance is in every way worthy of its literary and scientific excellence. We have noticed a few misprints, but with the exception of one or two incorrect references, and the use of the word *labial* for *radial* in the table on page 88, they are quite unimportant.

A TREATISE ON THE DISEASES OF INFANCY AND CHILDHOOD.

Second Edition, enlarged and thoroughly revised. By J. LEWIS SMITH, M.D., Curator to the Nursery and Child's Hospital, New York; Physician to the Infants' Hospital, Ward Island, etc. 8vo., pp. 740. Philadelphia, Henry C. Lea, 1872.

The first edition of Dr. Smith's work on the "Diseases of Infancy and Childhood" was published in 1869, and the demand for a new edition in 1872 shows that it has met with a fair degree of success. This success was, moreover, not unmerited; for, although the book was then incomplete, since many diseases which are generally treated of in similar works were not alluded to, it contained the results of much experience and of a good deal of reading. The present edition is much fuller than the first; for the author has not only rewritten some of the chapters, wherever the advance of medical science seemed to make this necessary, but has added much new matter.

After a very few general remarks on the subjects of infancy and childhood, Dr. Smith devotes a chapter to the "Care of the Mother during Pregnancy." This may appear to some unnecessary in a treatise of this kind; but there can be very little doubt that the health of the child will often depend upon the care which is taken of it during its intra-uterine existence, and we think he has done well in introducing it.

The care of the new-born infant forms the subject of the succeeding chapters. The author insists upon the great importance of attention to the diet and clothing of children, especially during the months immediately succeeding birth; and raises his voice in warning against the folly of attempting to harden them by exposure to cold, or by insufficient clothing. The directions which are given for the preparation of artificial food, when for any reason the child is deprived of its natural nourishment, are very judicious. We have no doubt that the ignorance which prevails as to the proper substitutes for the mother's milk, is the cause of much of the infant mortality in our large cities; and we have seen many cases where serious intestinal symptoms have seemed to be due wholly to neglect of so simple a precaution as that of washing out the feeding-bottle after each time it was used.

Diseases and accidents incidental to birth are next treated of, and these conclude the first part of the book.

Part Second is devoted to constitutional diseases. The diathetic diseases, such as rachitis, scrofula, syphilis, and tuberculosis, the eruptive fevers, the non-eruptive diseases, including diphtheria, pertussis, and parotiditis, and other general diseases, not embraced under any of these heads, are discussed at sufficient length; and we regret that our limits do not permit us to give Dr. Smith's views on these subjects.

The third part is divided into five sections, which are headed as follows: 1. Diseases of the Cerebro-Spinal System; 2. Diseases of the Respiratory System; 3. Diseases of the Digestive Apparatus; 4. Diseases of the Circulatory System; 5. Skin Diseases. An appendix contains Dietary Formulæ; Remarks on the Prevention of Scarlet Fever, by William Budd, M.D.; Remarks on the Diphtheritic Membrane, by Dr. Edward Rindfleisch; Observations on the State of the Liver in Infantile Enterocolitis; and cases of Intussusception. This summary shows the nature of the contents of the book. Certain sections are much less full than others,—that of the Diseases of the Circulatory System occupying only twenty pages, and containing only one chapter, which is on "Cyanosis." More space is given to the Diseases of the Digestive Apparatus; and the fact that Dr. Smith has enjoyed unusual advantages for the study of them makes this section peculiarly valuable, especially to the American physician, who is oftener called upon to treat them than those of any other class.

Dr. Smith's treatment is, in the main, simple. Although

apparently believing firmly in the power of drugs to modify morbid processes, he is not an excessive doser. The formulæ which are distributed through the book are, no doubt, well adapted to the conditions for which they are recommended; but we do not think that the value of the book is enhanced by their insertion, and we doubt whether he who goes to the bedside to treat diseases with a certain prescription, especially if it have originated with another, written out on paper or engraved on his memory, will ever become a great physician.

The book, as we have already said, is a good one; and, as such, it gives us pleasure to call our readers' attention to it.

THE URINE AND ITS DERANGEMENTS,—WITH THE APPLICATION OF PHYSIOLOGICAL CHEMISTRY TO THE DIAGNOSIS AND TREATMENT OF CONSTITUTIONAL AS WELL AS LOCAL DISEASES; being a Course of Original Lectures delivered at University College, London. By GEORGE HARLEY, M.D., F.R.S., etc. With Illustrations. 12mo, pp. 334. Philadelphia, Lindsay & Blakiston, 1872.

This book consists of a series of eleven lectures, and is an admirable introduction to the study of the urine and its teachings. Dr. Harley is clear and positive in his style, which is well adapted to impress upon the understanding and memory of his readers the facts of which he discourses. He opens with a short comparative examination of the composition of the urinous discharges from birds, reptiles, carnivora, herbivora, and omnivora, and then passes on to the consideration of the characteristics of normal human urine, its appearance and reactions. Among the methods of ascertaining the specific gravity, the thousand-grain bottle is ignored and a "pick-nometer" is used in its place: this instrument is objectionable only on account of requiring a calculation involving fractions to obtain the desired result, its principle being the same.

On the authority of Kaupp* it is stated that urine may be reabsorbed from the bladder; the watery parts being first taken up, then the phosphates, chlorides, sulphates, urea, etc.

The second lecture is devoted to the consideration of the changes in the composition of the urine induced by age, sex, food, drink, medicine, and disease. On page 42, opium, morphia, conia, hyoscyamus, cannabis indica, citrate of iron and quinia, and quassia, are classed together as decreasing the total amount of urinary solids; and digitalis, atropia, colchicum, and carbonate of potash as increasing them. On pages 81-83, colchicum, quinia, digitalis, acetate of potash, atropia, and cod-liver oil are recommended as checking the formation and consequently the elimination of urea and uric acid. Alcoholic drinks, beer included, lessen the urea and increase the uric acid in the urine; tea and coffee have the opposite effect.

Lecture third considers urea, its chemistry, physiology, and pathology; ammonæmia and uræmia. Dr. Harley does not believe that urea is formed in the kidneys, and he founds his belief on the fact that it is found in the blood, chyle, lymph, and the various humors of the eye. Unfortunately, no notice is taken of the experiments of Oppler,† Perls,‡ and Zalesky,§ which seem to prove that it is formed by the kidneys, as the removal of the kidneys stops the formation of urea, while ligation of the ureters causes its rapid accumulation in the blood.

Our author considers urea to be a "powerful irritant poison," and the immediate cause of uræmia. On page 57 he expresses this opinion in these words: "*True uræmia depends on the arrested elimination of the poisonous material by the kidneys; true ammonæmia on the reabsorption into the circulation of the decomposed secreted product. I believe that urea is a far more dangerous poison than the substance into which it is decomposed,—namely, the carbonate of ammonia.*" The symptoms of ammonæmia he gives as follows: "*In ammonæmia the urine is ammoniacal when passed. The breath and perspiration are ammoniacal. The mucous membrane of the mouth is dry and shining, the complexion is sallow, and there is increasing emaciation. No dropsical*

symptoms are present. Convulsions are rare, but intermittent ague is frequent. Death is generally preceded by coma."

Lecture fourth considers uric acid, its chemistry, physiology, and pathology; its presence and significance in diseases of the heart, lungs, liver, spleen, and kidneys, in gout and some other diseases, and as sand, gravel, and calculi.

Lecture fifth, hippuric acid in health and disease; chloride of sodium—its uses in the animal body, the amount in the urine during disease, and its effects as a remedy.

Lecture sixth, urohæmatin, and the abnormal pigments met with in white, yellow, green, blue, and black urine—their clinical significance and treatment. The coloring-matter of normal urine, which is here called urohæmatin, is considered to be to the clinical physician of more importance than the majority of urinary ingredients, as it is an index to the wear and tear of the tissues. Dr. Harley claims for himself priority in the discovery and separation of this substance in 1851, and takes no notice of the investigations of Dr. Schunck, which were much later in date, but were very laborious and comprehensive. Dr. H. recognizes but one normal coloring agent. His process of extraction may be roughly shown in a few words. Heat the urine, and add nitric acid to set the coloring-matter free; agitate with ether, which will dissolve out the impure urohæmatin; and separate by means of decantation. No mention whatever is made of chylous urine.

Lecture seventh, phosphoric acid and phosphates in diseases of the spinal cord, brain, bladder, rickets, and other affections; phosphatic gravel and calculi, their diagnosis and treatment. This is a most interesting and instructive chapter, and draws attention to the fact that an excess of phosphates in the urine does not indicate a repletion in the system.

Lecture eighth, oxalic acid and the sulphates.

Lecture ninth, the clinical significance and pathological importance of the presence in the urine of inosine, creatin, creatinin, cholesterin, cystin (calculi), xanthin (calculi), leucin, and tyrosin.

Lecture tenth, diabetes mellitus, its nature and rational treatment.

Lecture eleventh, albuminuria with and without dropsy, in connection with Bright's diseases, heart- and liver-disease, pregnancy, fevers, etc. No recognizance is taken of the fact, as demonstrated by Pavy, that albumen, caseine, or gelatine, if injected into a blood-vessel, will be excreted unchanged by the kidneys; or that a hearty meal, consisting largely of albumen, after prolonged abstinence may cause the appearance of albumen in the urine.

Dr. Harley is very methodical in his treatment of his subjects; he considers each constituent of the urine separately, under the various heads of chemistry, physiology, pathology, and treatment. He is terse, clear, and decided in every portion, and is quite original. The work is a valuable addition to medical literature. It is furnished with a complete index.

THE CORRECT PRINCIPLES OF TREATMENT FOR ANGULAR CURVATURE OF THE SPINE. By BENJAMIN LEE, A.M., M.D. Philadelphia, J. B. Lippincott & Co., 1872. Pp. 77.

This excellent little work is in the main a republication of one of the papers contained in a volume now for several years out of print. The matters embraced in it are of the highest practical importance, and we can, from our own experience, indorse the views laid down by the author.

We have only space for a very brief analysis of these views, but trust that they will be carefully examined by all those to whom they may have hitherto been unfamiliar.

Dr. Lee justly insists on the importance of an early recognition of spinal curvature, in order to its arrestment before deformity has become inevitable, and has appended a valuable table showing the differential diagnosis between this and the other affections for which it is most likely to be mistaken. Contrary to the usual belief, and to the statements of systematic writers, the pain in antero-posterior curvature is referred, not to the spine, but to the front of the trunk.

Dr. Lee advocates an almost exclusively mechanical treatment, on the principle of straightening out the spine, so ingeniously developed by his former associate, Dr. C. F. Taylor, of New York. Of the apparatus we can only say here that it is so arranged as to bear, not on the projecting spinous processes,

* Parkes, p. 108.

† Beitr. z. Lehre v. d. Urämie, *Arch. f. Path. Anat.*, Bd. xxi. p. 260.

‡ Beitr. z. Lehre v. d. Urämie, *Königsberg. Med. Jahrb.*, Bd. iv. p. 56.

§ Untersuch. v. d. urämischen Process, etc., Tübingen, 1865.

but somewhat to each side of them, and to prevent, by means of stop-hinges, the shoulders and hips from so coming forward as to compress the diseased vertebræ and intervertebral substance. For this the oblique processes of the vertebræ afford fulcrum.

An essay on Modified Suspension, reprinted from the Transactions of the Pennsylvania State Medical Society for 1870, occupies the last sixteen pages of our author's text, and is not inferior in value to the preceding portion of the book. The mechanical execution of the volume is unexceptionable.

MEMORANDA ON POISONS. By the late THOMAS HAWKES TANNER, M.D., F.L.S. Third and Completely Revised Edition. 18mo, pp. 155. Philadelphia, Lindsay & Blakiston, 1872.

The present edition of Dr. Tanner's Memoranda has been in great measure remodelled, to make it valuable to students as well as practitioners. Attention is paid to the clinical aspects of poisoning as heretofore, but closer attention has been given to its chemical bearings, and important and reliable tests and processes for separating the poisons from organic mixture have been added. The classification is new, and more valuable and suggestive than anything heretofore adopted.

DIARY OF A SPRING HOLIDAY IN CUBA. 12mo, pp. 124. Philadelphia, Porter & Coates, 1872.

This little book was originally intended merely for circulation among the friends of the author, but at the request of the publishers has been given to a larger circle of readers. As its name implies, it is not medical in character: it contains, however, some information in regard to the climate of Cuba which will be found of value to the physician; while general readers will gain from it a better insight into the manners and customs of the Cubans than is sometimes obtainable from more extended treatises.

Although no name appears on the title-page, we are at liberty to say that its author is Dr. R. J. Lewis, the well-known surgeon of this city.

BOOKS AND PAMPHLETS RECEIVED.

Present State of Electro-Therapeutics. By A. D. Rockwell, M.D. Reprinted from the *American Practitioner* for May, 1872.

Fifty-Fifth Annual Report on the State of the Asylum for the Relief of Persons Deprived of the Use of their Reason.

Report to the Surgeon-General of the United States Army on the Minute Anatomy of Two Cases of Cancer. By Assistant-Surgeon J. J. Woodward, U.S.A. War Department, Surgeon-General's Office, Washington, D.C., 1872.

Lectures on the Principles and Practice of Physic, delivered at King's College, London. By Sir Thomas Watson, Bart., M.D., F.R.S., etc. In two volumes. From the Fifth Revised and Enlarged English Edition. Edited, with Additions and Numerous Illustrations, by Henry Hartsorne, A.M., M.D., Professor of Hygiene in the University of Pennsylvania. 8vo. Vol. i., pp. 880; vol. ii., pp. 992. Philadelphia, Henry C. Lea, 1872.

Amnesic and Ataxic Aphasia, with Agraphia and Temporary Right Hemiplegia, the Result of Embolism of the Left Middle Cerebral Artery. By T. M. B. Cross, M.D. Reprinted from the *American Practitioner* for April, 1872.

Eighth Annual Report of the Alumni Association of the Philadelphia College of Pharmacy, 1872.

ARTIFICIAL FECUNDATION.—M. Paul Labarthe describes, in *Le Mouvement Médical*, an instrument devised by M. Roubaud for facilitating the artificial impregnation of women. It is said that twelve cases are reported in which fecundation was successfully accomplished by the methods recommended by Dr. Marion Sims, of New York, and Prof. Courty, of Montpellier.

GLEANINGS FROM OUR EXCHANGES.

KIDINGA PEPO.—Under this name, Dr. James Christie, Physician to the Sultan of Zanzibar (*The British Medical Journal*, June 1, 1872), gives a detailed account of a disease which occurred epidemically in that island during the month of July, 1870. The symptoms of the disease bear a striking resemblance to those presented by "dengue" or "break-bone fever," as described by Dr. George B. Wood in his work on "The Practice of Medicine," but are thought by Dr. Christie not to be identical. The term "kidinga pepo" properly means "cramp-like pains, produced through the agency of an evil spirit."

"The disease was not ushered in by any observable premonitory symptoms, but was, in a very marked manner, a sudden seizure; the first symptoms being pain and stiffness of the muscles, more observable in the palms of the hands and soles of the feet, and elicited when any attempt at motion was made. In three cases under my charge among Europeans, these symptoms were observed on rising from the dinner-table. One of them, a very intelligent boy of about seven years, complained that he had difficulty in getting off his chair, owing to stiffness in the body. This was speedily followed by a general febrile state, varying greatly in intensity; the skin became hot and dry; the tongue red and spotted, but generally clean; the face of a bright scarlet color, disappearing on pressure, but returning when the pressure was removed. This discoloration was in every case peculiarly marked, extending from cheek-bone to cheek-bone across the bridge of the nose, and usually accompanied by a puffy swelling, indicating infiltration in the adjacent subcutaneous areolar tissue. The appearance was almost identical with the usual symptom of an attack of erysipelas of the face, and it was so well marked and invariable that I always regarded it as symptomatic of the disease. In addition to the stiffness first complained of, there was pain over the whole of the body, more especially in the shoulders, back, ankle-joints, and the soles of the feet; and towards the close of the first twenty-four hours there was swelling of the smaller articulations, and pain was always felt on pressure of the joints of the fingers and toes. There was also very obstinate constipation, and it was always necessary to administer very large doses of purgatives before any motion could be effected. The average duration of this, the first or febrile stage, was about forty-eight hours, the symptoms then beginning gradually to subside.

"The febrile stage was followed by a period of remission of from two to three days, during which the febrile symptoms were entirely absent, there being only general debility and occasionally slight muscular pains. The remission was usually so complete that it was with great difficulty that the patient could be persuaded to remain within the house, and the natives, as a rule, returned to their usual avocations.

"On the fourth day, there was generally a slight return of the febrile symptoms, but always much less severe than during the first stage, and in many cases there was no fever whatever.

"On the fifth day, the exanthematous eruption invariably appeared. This eruption resembled neither that of measles, rubella, nor scarlet fever; but always appeared to me much more like that of erysipelas, with this important exception, however, that the discoloration was much less intense, and spread over the entire body within forty-eight hours. In regard to the wavy outline, the boundary between the affected and the uncontaminated tissues, the resemblance was complete. This eruption, even in the mildest cases, was always observable on the palms of the hands and soles of the feet; but it never originated there, its course being always from the head and face downwards. When this eruption had reached its maximum of intensity, the superficial lymphatic glands of the neck and face began to swell, and invariably the occipital glands. I never saw a case in which this did not occur. Swellings of the lymphatics of the neck, axilla, and groin were general, but not invariable.

"At about the same time that the lymphatics began to swell, the mucous membrane of the mouth and nose was implicated, and, in severe cases, that of the throat. In mild cases there were merely redness and tenderness of the mucous membrane,

but in severe cases there was an aphthous eruption, giving rise to great tumefaction of the lips and nose, conjoined with excessive pain, the mucous surfaces becoming quite raw.

"During the fifth and sixth days, the muscular stiffness and pain continued, and there was also severe articular pain on the slightest movement. On the seventh or eighth day, there was desquamation of the cuticle, and the acute stage terminated.

"The sequelæ of dengue seem to have been much less severe and prolonged than in 'kidinga pepo.' In cases of the latter, which had been allowed to run their natural course either through non-treatment or improper treatment, the symptoms for weeks and even months were most painfully severe, and far exceeded anything experienced during the acute stage of the disease. I was myself the first European attacked, and at an early period of the epidemic, when I knew but little of the very painful and prolonged effects of the disease. The attack came on very suddenly, a few hours after visiting a native lady who was suffering from a very severe attack. During the primary stage, I was necessarily confined to bed for one day; but although the muscular and articular pains were very acute, I was obliged to attend daily to my dispensary patients. On the fifth day, the general eruption appeared, and also the aphthous eruption on the mucous membrane of the mouth and nose. The muscular and articular pain was excessive, and it was with the greatest difficulty that I walked a short distance to attend a case of emergency. I had to remain out all night; but found it better to move about constantly, as the pain on rising from my chair was very severe after a short interval of rest. From having neglected, to a certain extent necessarily, the proper precautions, I suffered most severely for more than two months afterwards. There was general muscular pain and stiffness, but all was comparatively slight to the excruciating pain endured at the insertion of the deltoid muscle of the left arm. The slightest movement of the arm caused unbearable pain, and for several weeks the arm had to be supported by a sling. At that early period of the epidemic I had seen no very severe cases, the attacks being much more mild among the native than the European population. My first knowledge was, therefore, derived from my own experience, and I speedily became aware of the great importance of early and energetic treatment in order to insure the absence of such painful results.

"The parts most painfully affected during the chronic stage were the shoulder, wrist, and ankle-joints; and the pains were generally metastatic and recurring. It was very common for one joint only and the neighboring tissues to be affected, and the one most frequently attacked was the shoulder-joint. In some cases the pain was very distinctly articular, and friction was felt on movement of the joint, as if there had been absorption or arrested secretion of the synovial fluid. It was more common, however, for the severe pain to be complained of in the muscles, and in particular at the insertion of the deltoid in either arm. In addition to these semi-rheumatic pains, there were also chronic swelling and tenderness of the superficial lymphatics; and when the affected glands lay in exposed places, liable to pressure, as in the foot, they occasioned much suffering.

"The disease seemed to be communicable, for, as a rule, the entire household was attacked; but it was not at all common for two individuals in the same house to be attacked simultaneously; as one recovered, another was attacked. The Europeans suffered much more acutely than the natives, and very few escaped an attack. In no case did the disease recur in the acute form, and there were no fatal cases among either children or adults.

"Treatment.—After having treated a few cases as I would a case of acute rheumatism, with very unsatisfactory results, I adopted a different plan, which I continued throughout the entire epidemic. During the first day, I prescribed purgatives and five-grain doses of quinine, treating the case precisely as if it had been a case of malarious fever. Whenever the febrile symptoms disappeared, I administered iodide of potassium in four-grain doses, and continued it during the remission, and for a few days after desquamation of the cuticle had taken place. The effect of iodide of potassium was most marked, and, when it was administered at the time stated, I never had any trouble with the usual sequelæ, and the patient

suffered but little from articular pains during any period of the disease. I know no medicine more entitled to the name of a specific than the iodide, its effects in subduing the disease being more marked than those of quinine in the treatment of malarious fever. Even in neglected chronic cases, where the pains had continued for months, relief was invariably afforded by the use of iodide of potassium."

TRACHEOTOMY BY GALVANO-CAUTERY.—In the Academy of Medicine, April 23, M. Verneuil (*The Boston Medical and Surgical Journal*; from *The Dublin Medical Press and Circular*) observed that tracheotomy, as usually practised, is a dangerous operation on account of the hemorrhages, which are so difficult to be avoided, and on account of the introduction of air into the veins. In the case of a patient, aged 38, nearly asphyxiated from tuberculization of the larynx, Verneuil performed tracheotomy by the aid of galvano-cautery. The point of the knife was heated to a dull red, and entered at the level of the cricoid ring. The instrument, moderately pressed, and slowly cutting, easily penetrated the skin for about a length of three centimetres. The knife, again heated, was carried again to the upper part of the wound, and then brought slowly down, dividing the aponeurosis and separating the thyro-hyoid muscles. A third time the knife was used in the same manner, cautiously and slowly, and then, two assistants pulling the wound asunder by hooks, the eye and fingers could easily detect the cricoid cartilage and upper rings of the trachea, which were naked and almost as visible as upon the subject. The cartilages of the first two rings were then divided by the heated knife. No blood was spilt during the operation. The operation lasted some six minutes. The patient did well, and ten days after the operation the tube was removed.

SYRUP OF THE IODIDE OF STARCH.—A preparation of this kind appears to be a mode of giving iodine (*The Practitioner*, June, 1872) in use among Italian physicians when ordinary preparations cannot readily be taken. The formula, in imitation of a secret preparation of Quesneville's, is: powdered starch, 24 grammes; distilled water, 350 grammes; iodine, 2 grammes; powdered sugar, 640 grammes. Boil the water and starch in a glass retort for three or four minutes, then filter through linen. When cold, mix very slowly, and triturate carefully with the iodine, which has been previously finely powdered with a small quantity of alcohol. Pour the mixture on to the sugar in a narrow-mouthed bottle, and shake. Let it stand one day; decant, and keep from the light. The result is a perfectly transparent syrup of a blue color, miscible with water. The dose is a dessertspoonful night and morning to commence with.

CONVULSIONS IN TUBERCULAR MENINGITIS.—Dr. Joseph Bierbaum, in the course of a long article in the *Journal für Kinderkrankheiten* for May and June, 1871, says that convulsions are rarely an early symptom of tubercular meningitis, but are much more apt to occur after the patient has been sick for a week or ten days. He is indisposed to attach more importance to the *tache méningitique* of Trousseau as a sign of the disease.

NÆVUS MATERNUS CURED BY SUBCUTANEOUS RUPTURE OF THE VESSELS.—Mezger reports, in *Langenbeck's Archives*, a case of telangiectasia cured in the following way: While the vein leading from the part was compressed with one hand, the vessels were ruptured by a sudden blow from the other. This was repeated several times, with the result of producing a complete cure without a cicatrix.

M. DUQUESNIL (*L'Abeille Médicale*, May 6; from the *Bulletin Général de Thérapeutique*) recommends the addition of the oil of eucalyptus to cod-liver oil, in the proportion of one gramme of the former to one hundred of the latter, to deprive it of its disagreeable odor and taste.

DISCOLORATION OF THE SKIN.—Dr. Ollivier calls attention, in the *Gazette Médicale de Paris*, May 18, to a peculiar blue discoloration of the face and arms in those whose occupation it is to polish silver.

M. FRONÉ reports, in the *Montpellier Médical* for February, a case of epithelioma of the lip successfully treated by the local application of creasote.

A NEW METHOD OF TREATING HYDROCELE.—Mr. S. Messenger Bradley, of Manchester, England (*The British Medical Journal*, June 1, 1872), recommends, after the liquid of a hydrocele is withdrawn, that the testicle of the affected side should be tightly strapped with soap-plaster. In four cases in which this was done, complete obliteration of the vaginal sac, and a consequent radical cure, took place.

MISCELLANY.

MORE HONOR FOR AMERICAN SURGEONS.—We learn with pleasure that the University of Oxford, England, has recently conferred the degree of Doctor of Civil Law upon our distinguished fellow-townsmen Dr. Samuel D. Gross, Professor of Surgery in the Jefferson Medical College.

It is said that Dr. William Stokes, Regius Professor of Physic in Trinity College, Ireland, and well known in this country as author of a work on the "Diseases of the Heart and Aorta," is about to be made a baronet.

THE SUMMER RECESS.—The spring course of lectures at the Medical Department of the University of Pennsylvania and at the Jefferson Medical College came to a close on Friday, June 21. At each institution the class in attendance is said to have numbered from fifty to seventy students. The recess will continue until the first Monday in September, when the course will be resumed. The lectures delivered during the autumn are always of an eminently practical character.

ANGLO-AMERICAN DIPLOMAS.—The following correspondence, which we take from *The British Medical Journal*, June 1, 1872, shows that the demand in England for bogus diplomas still continues:

"UNIVERSITY OF LOUISIANA, MEDICAL DEPARTMENT,
NEW ORLEANS, May 1, 1872.

"SIR,—The sale of diplomas in Philadelphia having been stopped by the withdrawal of the charters of the two offending medical colleges, English customers have turned their attention to Southern institutions; and, as you may see by the accompanying letter, it is only necessary that we should signify our willingness to engage in the business, to secure an abundance of customers.

"I am, very respectfully, your obedient servant,

"T. G. RICHARDSON, M.D., *Dean*.

"P.S.—You are entirely at liberty to publish the above note, along with the proposal for *diplomatic* correspondence.

"PACKINGTON COLLEGE, 145 PACKINGTON STREET, LONDON,
January 13, 1872.

"DEAR SIR,—Some friends of mine, legally qualified British physicians, are desirous of receiving honorary degrees of M.D., LL.D., etc. Will you be kind enough to let me know if you can assist them?

"Yours, very truly,

"E. STURMAN.

"In confidence."

Dr. Richardson also received a printed prospectus, announcing "Dr. Edward Sturman, M.A., F.G.S. Edin., Member of the Royal College of Preceptors," as "Principal of the Packington College for Ladies, Packington Street, London," and setting forth that "parents may feel assured that every effort will be made to give the pupils such an education as will fit them for the present lady-like state of society. Punctuality, cleanliness, and moral duties will be strictly inculcated, and the groundwork of religious belief laid by daily reading of the Holy Scriptures; but no sectarian bias will be given."

CONFESSION NO PROOF OF GUILT.—The *Lyon Medical* of April 28, 1872, refers to the case of a girl, aged twenty, supposed to be seven months pregnant. After an attack of hemorrhage, her size seemed to have considerably diminished, and the girl, being closely questioned on the subject, said that, becoming aware of a discharge, she repaired to the closet, where she stayed ten minutes. She added that all had escaped, but that she had no time to look, as she was being called by her mistress. A midwife and the parish surgeon both declared that the girl had been recently confined. She was now again assailed with questions, and told that, for her own sake, she had better make a clean breast of it, as no fetus had been found in the closet. Perhaps, it was suggested, she had thrown it into the pig-stye. The poor creature at first denied such a thing, but at last confessed that it was so. A search was made, but no child was discovered. She was tried for concealment of birth, on her own confession, and sentenced to six months' imprisonment. The girl had not been taken into custody, in consideration of her free confession, and she quietly proceeded to the jail. When admitted, it was found that she was far advanced in pregnancy, and she soon gave birth to a healthy girl. By the French law she could no longer appeal, as more than ten days had elapsed since the verdict; but the judge, having the power of appealing within two months, did so, and the girl was acquitted.

The Lancet, of May 18, in commenting on this case, says, "This case shows that confession, which is always looked upon as the clearest proof of guilt, cannot always be relied upon. And what shall we say of the surgeon and midwife? The examination was probably hurried and incomplete, and the conclusion arrived at on seeing the signs of recent abundant hemorrhage."

A DOCTOR GONE MAD.—Dr. —, one of the best accoucheurs of Paris, has been recently confined in the hospital at Charenton. His insanity manifested itself in the most singular manner imaginable. On the 11th of March he was permitted to go to his banker's to collect some money. At the moment the cashier presented his head at the little door of his desk, the doctor exclaimed, "Bravo! the infant presents by the head!" and, seizing the unhappy cashier by the hair, he pulled most desperately. The cries of the victim brought the employees, and it was with the greatest difficulty that they conducted the doctor to his house.

A PRIZE FOR AN ESSAY ON THE THERAPEUTIC USE OF CREASOTE.—We learn from the foreign journals that the sum of three hundred thalers (about \$220) has been placed at the disposal of the medical faculty of the University of Leipsic as a prize for the best essay on "The Therapeutic Uses of Chemically-Pure Wood-Creasote." The essays are to be sent in to the Leipsic medical faculty up to March 31, 1873; and their relative merit is to be tested by clinical experiment.

A MEDICAL SCHOOL AT BORDEAUX.—A Faculty of Medicine is to be created at Bordeaux, to replace that of Strasburg. It is also in contemplation to establish a School of Medicine and a School of Pharmacy at Lyons.

A BUST of Delpech, the celebrated surgeon of Montpellier, has been recently placed in one of the public buildings of that town.

SMALLPOX IN VIENNA.—From January 1, 1872, up to April 20, inclusive, 458 persons (218 men and 240 women) have died in Vienna of smallpox.

A STRIKE AMONG THE DOCTORS' COACHMEN.—A strike which interests physicians more than such movements usually do, has recently taken place in Edinburgh. The doctors' coachmen there have held a public meeting and passed the following resolution: "The doctors' coachmen, having met and taken into consideration the length of time they are daily on duty, and the additional Sabbath labor they have to do, resolve to bring the matter under the notice of their employers, with a view to some arrangement being come to which shall free them from Sabbath duty, and that a committee be appointed, with power by conference or otherwise to lay the matter fully before their employers, and to report to a subsequent meeting."

A GOLD COIN SWALLOWED BY A DOG.—The following, which seems *apropos* to the communication on "The Swallowing of Insoluble Bodies by Children" which we have recently published, we take from a French journal. A dog which had been taught to fetch pieces of money swallowed one day a twenty-franc piece, which, in the absence of sous, had been thrown to him by his master. The animal, the journal goes on to say, finding the coin of sufficient value to keep, swallowed it. M. Weber, who was called upon in the emergency, administered to it purgatives and emetics, but without success. Sixty-four days later the dog fell sick, and, the next day, threw up the coin, and by way of interest two sous, which were covered with verdigris.

QUACKERY AND THE RELIGIOUS PRESS.—At a recent General Methodist Conference a proposition was made to prohibit the publication of quack advertisements in the Church journal. The matter was referred to an appropriate committee. *The Medical Record*, from which we take this item, says, "We would suggest that not only the objectionable advertisements be ordered a refusal, but that every clergyman giving his individual endorsement to patent nostrums be deprived of his ecclesiastical rights."

MORTALITY FROM SMALLPOX.—The number of deaths from smallpox in Philadelphia during the weeks ending June 15 and 22, 1872, were respectively 19 and 19, of which 29 were of minors.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending	
	June 15.	June 22.
Consumption	51	35
Other Diseases of Respiratory Organs	36	29
Diseases of Organs of Circulation	16	17
Diseases of Brain and Nervous System	60	53
Diseases of the Digestive Organs	27	55
Diseases of the Genito-Urinary Organs	2	6
Zymotic Diseases	51	42
Cancer	7	1
Casualties	11	11
Debility	35	30
Intemperance	5	0
Old Age	13	7
Scrofula	2	3
Stillborn	18	15
Suicide	3	0
Tetanus	2	1
Tumors	1	0
Unclassifiable	9	5
Unknown	2	0
Totals	351	310
Adults	162	116
Minors	189	194

INFANT MORTALITY DURING THE SIEGE OF PARIS.—A writer in the *Journal für Kinderkrankheiten* for May and June, 1871, says that there are scarcely any records in the annals of medicine of a mortality among children so frightful as that which took place in Paris during the siege. This he attributes to the absence of observance of all hygienic rules, and to the bad quality and insufficient quantity of food. This affected the child either directly, or indirectly through the mother, who was further unfitted to be a good nurse in consequence of the exciting or depressing emotions of which she was constantly the subject. In the eight weeks from January 21 to March 17, 4703 children under one year of age died, and in the first week of this time as many as 800.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JUNE 5, 1872, TO JUNE 18, 1872, INCLUSIVE.

STORROW, SAMUEL A., ASSISTANT-SURGEON.—By S. O. 133, War Department, A. G. O., June 10, 1872, to report in person to the Commanding General, Department of the Lakes, for assignment to duty.

BROWN, H. E., ASSISTANT-SURGEON.—By S. O. 131, War Department, A. G. O., June 7, 1872, relieved from the operation of S. O. 118, c. s. A. G. O., and to report in person to the Surgeon-General for special instructions.

COUES, ELLIOTT, ASSISTANT-SURGEON.—By S. O. 120, War Department, A. G. O., June 6, 1872, the order directing him to report to the Commanding General, Department of Dakota, is suspended for four months.

LAUDERDALE, J. V., ASSISTANT-SURGEON.—By S. O. 113, Department of the East, June 17, 1872, assigned to temporary duty at Fort Wood, N. Y. Harbor.

POPE, B. F., ASSISTANT-SURGEON.—By S. O. 115, Department of the South, June 4, 1872, granted leave of absence for thirty days.

LORING, L. Y., ASSISTANT-SURGEON.—By S. O. 113, c. s., Department of the East, assigned to duty as Post-Surgeon at Plattsburg Barracks, N. Y.

CAMPBELL, A. B., ASSISTANT-SURGEON.—By S. O. 128, War Department, A. G. O., June 4, 1872, granted leave of absence for six months, on Surgeon's certificate of disability.

HARVEY, P. F., ASSISTANT-SURGEON.—By S. O. 105, Department of Texas, June 7, 1872, granted leave of absence for thirty days, on Surgeon's certificate of disability.

NAVY NEWS.

CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FROM JUNE 1 TO JUNE 20, 1872.

Assistant-Surgeon R. A. MARMION ordered to the Naval Hospital, Washington, D. C.

Medical Director WM. JOHNSON ordered as member of Examining Board, Washington, D. C.

Surgeon S. D. KENNEDY detached from the Ossipee, and sick-leave.

Surgeon F. E. POTTER detached from the Mohican, and waiting orders.

Assistant-Surgeon M. D. JONES detached from the Mohican, and waiting orders.

Medical Director J. C. PALMER appointed Chief of Bureau of Medicine and Surgery, and Surgeon-General U. S. N.

Surgeon-General J. M. FOLTZ detached from Bureau of Medicine and Surgery.

Medical Director JOS. BEALE, Medical Director GEO. MAULSBY, Surgeon T. J. TURNER, Surgeon P. S. WALES, Surgeon A. L. GIBON, detached from Medical Examining Board, Philadelphia, and waiting orders.

P.-A.-Surgeon H. J. BABIN, temporary recruiting duty, New York.

Assistant-Surgeon ADAM FRANK, temporary recruiting duty, Philadelphia.

Assistant-Surgeon E. C. DUNNING detached from Naval Hospital, Washington, and ordered to the Powhatan.

Assistant-Surgeon D. DICKINSON detached from the Powhatan, and waiting orders.

Assistant-Surgeon E. C. THATCHER detached from the Pawnee, and ordered to the Canonicus.

Assistant-Surgeon B. S. MACKIE detached from the Canonicus, and ordered to the Naval Hospital, N. Y.

MONDAY, JULY 15, 1872.

ORIGINAL LECTURES.

ON EMETICS.

BY JOSEPH CARSON, M.D.,

Professor of Materia Medica and Pharmacy in the University of Pennsylvania.

LECTURE III.

3. *To impress the lungs.*—The effect upon the lungs in association with the forced efforts at expiration in the operation of an emetic has been alluded to. This effect may be advantageously called into requisition in many cases where the lungs are clogged with secretion, and where there is difficulty of expectoration. With children, sometimes an emetic is the best expectorant, as in cases of croupy catarrh, or of true croup where the patient is threatened with suffocation.

4. *To reduce the arterial circulation and abate feverish excitement.*—That emetics are evacuants in the extended acceptance of the term, there can be no question. The depletory effects are due to the removal of nutrient articles from the stomach, as well as to free discharge from the mucous membrane and emunctories, by which a draft is made upon the vascular system. The state in which the patient is left, with free exudation from the cutaneous surface, further contributes to the evacuant and sedative effects.

But nausea is in itself a depressing influence. Under its production the circulation is lowered, and this contributes to the maintenance of the diaphoretic impression. Some of the articles that are used for emetic purposes are in themselves diaphoretics; and when their full power is exerted on the circulation there is a continuance of this mode of operating.

The nervous depression caused by an emetic, allied to syncope, is similar to that produced by bloodletting; and from it the physician can derive much advantage. It is, from the first, one of the most energetic sedatives; for bloodletting and cold alone can be compared to it. The difference is that bloodletting occasions a spoliation from which time is required to recover, while the disturbance caused by emetics affects the nervous functions alone, and leaves the economy with full capacity for reaction. "Emetics, then, are powerful antiphlogistic means, which can take the place of bloodletting with great advantage."*

In fevers of the synocha or sthenic type, the use of emetics has been perpetuated from the remotest times, under the idea that the stomach, as well as the system, was thus prepared for the institution of subsequent treatment. Malarial fevers are subjected to this mode of medication not only with the view to empty the stomach and unload the liver, as also to impress the portal circulation, but for the purpose of bringing on a more speedy solution of the feverish condition, and to abridge the paroxysm. "Early exhibited, an emetic operating well will frequently check an attack; and in a more advanced stage, judiciously repeated, we shall find the pulse reduced, pain in the head relieved, sickness of stomach appeased, temperature of the surface lowered, with diaphoresis, which restores quietness and hastens a critical solution."† Similar testimony has been given by Tissot in his account of the epidemic bilious fever of Lausanne. In the treatment of inflammations, emetics are resorted to for the purpose of this sedative impression: it has an undoubted control over the cap-

illary circulation, and when judiciously employed constitutes a powerful means of relief. In the early stage of an inflammation, a restraint may be placed upon the morbid activity of the vascular capillary circulation, whereby resolution can be effected; and should the inflamed tissue be a secreting one, the free discharge from it further contributes to a cure. In this way angina tonsillitis is sometimes speedily relieved, and the disease arrested, or, in cases of bronchitis or laryngitis, a more rapid termination may be brought about.

In dysentery, emetics were used formerly by physicians, and highly spoken of. Lind has vaunted their efficiency in the dysenteric affection of warm climates.

In the treatment of hemorrhages, emetics have been resorted to, especially in hæmoptysis. Here the design is to depress and at the same time to equalize the circulation. It has likewise been successful in anticipation of an attack of that disease. This was the practice of Dr. Bryan Robinson, of Dublin; but it was objected to by Cullen, on account of the risk entailed by the concussion. Of this practice, Dr. Chapman remarks that emetics will occasionally check pulmonary hemorrhage: "I have seen spontaneous vomiting do it in several instances, and the worst case that ever came under my notice was completely suspended by a dose of digitalis which puked violently. Led by these facts, I have for several years been much in the habit of prescribing emetics in hæmoptysis."‡

5. *To promote absorption.*—This indication applies to absorption from the mucous surface of the stomach and alimentary canal, and to that in parts distant from the central organ which is concerned in the operation. By the removal of deposits of tough or viscid mucus from the lining membrane of the stomach, medicinal articles are more readily introduced into the circulation. Where the stomach, from the cause specified, is unfitted for osmotic action, articles of primary importance may remain in contact with the surface without absorption: hence, in the treatment of intermittent fever, the antiperiodic remedies may fail for want of absorption, until the end has been secured by cleansing the stomach. The use of emetics in these cases is an old practice, but it has been brought more prominently before the medical public in later times by Bretonneau. This physician made comparative experiments at the Hospital of Tours. He vomited and purged some of his patients before the employment of quinia, and others he treated without any previous evacuation. The results were very different: in the first the fever was shortened more rapidly and certainly than in the second. The appetite and the strength were soonest re-established by pursuing this method.§ What applies to emetics may also be said of purgatives.

As depression of the circulation is produced by the operation of an emetic, an influence must be exerted upon effused liquids either in the cellular tissue or in the cavities of the body. The depression of the circulation is not the sole means of inducing absorption: in consequence of the discharge by the mucous surfaces and from the skin and emunctories, the amount of fluid in the vessels is lessened, thus producing an avidity on their part for the introduction of fluid, and with it matters in solution. There is another effect that must not be overlooked, which is the promotion of the functions of the kidneys, by which the circulation is kept free from foreign matters. Secondary evacuation may come from this cause as well as depuration.

In the treatment of orchitis and bubo the employment of emetics was recommended by John Hunter, to fulfil the purposes of reducing inflammatory excite-

* Trousseau et Pedoux, *Traité de Thér.*, tom. ii. p. 87.

† Chapman, *op. cit.*, vol. i. p. 123. Alibert, *op. cit.*, i. 222.

‡ Loc. cit.

§ Trousseau et Pedoux, *op. cit.*, tom. ii. p. 997.

ment and promoting the absorption of the effused matters.

6. *To induce relaxation.*—With this intention, surgeons formerly were in the habit of administering nauseating emetic articles to produce complete muscular relaxation in reducing luxations. This practice now has given place to the use of anæsthetics. They may be given, however, with the same intention in spasmodic croup, in lodging of food or foreign bodies in the cesophagus, in spasmodic asthma, in whooping-cough, etc. Where they cannot be taken by the mouth, they may be used hypodermically, or thrown into the rectum.

7. *To revulse by means of the impression upon the stomach.*—It is assumed that the mucous membrane of the stomach, when irritated by a stimulating emetic, is the seat of considerable fluxionary movement, and hence the extreme vascular distribution of the cœliac arteries becomes turgid, and this extends to contiguous organs. When emetics act legitimately they excite without producing irritation, and the effect upon the mucous membrane is augmented secretion; and this effect extends to the adjacent secreting organs. This is shown by a larger quantity of fluid being discharged than is taken into the stomach.

Upon this view of a fluxionary determination to the stomach is based the supposition of revulsive action. Congestion of an organ, if it be inordinate, will interfere with its functions; and the stomach is too delicate as well as restricted an organ to be used in the direct way of revulsive impression. If the intention be to impress the extreme terminations of the portal circulation, and to produce a revulsive effect upon the organs in which this centres, the alimentary canal affords a much more efficient mode of carrying out the indication. If general revulsive effects are induced by emetics so as to influence distant organs, it must be due to the amount of discharge by secretion from the mucous surface as well as from the liver and pancreas; and this is accomplished best by articles non-irritating but sedative in their nature.

It is supposed by Alibert that emetics could be of great advantage in inflammation of the mucous membrane of the intestines, in changing the point of irritation and distributing it to other points of the economy. The advantage arises rather from the effects upon the abdominal organs that have been specified. In dysentery, a considerable advance towards the cure has been made when, by unloading the liver, the return of blood through the portal veins is unimpeded. Upon the same principle alone can be explained a relief from hemorrhoidal tumors which has by some authorities been imputed to emesis.

From the close sympathy which exists between the mucous membrane of the alimentary canal and the skin, and the resemblance between them in anatomical structure, an especial derivative influence has been attached to the operation of emetics. Of this Alibert remarks as follows: "This intimate correspondence of the mucous membranes and of the skin produces two opposite and successive movements in the animal economy, when vomiting is produced. Buchner, with other physicians, has pointed out, for example, that at first the humors are directed suddenly towards the centre of the digestive organs, while there exists a state of constriction upon the external surface of the body; but soon the cutaneous exhalants relax, and then they obey an opposite reflux, from which considerable sweat results. This balancing between the central forces and those of the periphery is usefully considered. It suggests the method of cure of a multitude of diseases."* The free perspiration which fol-

lows the employment of emetics would appear, however, to be independent of any sympathetic connection between the two surfaces, and to depend upon the general depression of nervous action in its effect on capillary circulation.

In the treatment of mania, emetics have been employed under the impression that they concentrated new excitement in the stomach, and were thus therapeutically revulsive. Whatever advantage, however, may be derived from this plan of treatment must have a wider range of explanation than that afforded by revulsion. Other modes of operating that have been discussed as pertaining to emetics are most probably those that are efficient.

In order to subdue a furious fit of excitement in maniacs, emetics may be resorted to with advantage. Dr. Pritchard has observed them to produce calmness and a mitigation of violence, their exhibition being followed by a restoration of sleep and tranquillity.†

In delirium tremens the use of emetics originated with Stoll. This was the practice introduced into Philadelphia by the late Dr. Joseph Klapp. In certain cases where the stomach is foul and disordered, with a fuliginous condition apparent, it has its advantages.

In treating wounds of the head, emetics were recommended by Dessault, who viewed them as revulsive from the head, as diffusing excitement throughout the economy, and as impressing the functions of the liver.

Means of aiding the Operation of Emetics.—The introduction of fluids into the stomach when an emetic has been given is an old custom, under the impression that it is necessary to "wash out" the organ, or cleanse it of all offensive materials. If there be irritation of the stomach from the presence of such materials, and a tendency to nausea, large quantities of warm water, by distending the organ, will induce the result of vomiting and consequent relief. To aid in the operation of an emetic, the same practice may be resorted to. Insipid substances in solution, as the gummy or mucilaginous, are resorted to, or even oily fluids. Warm water in itself excites nausea and vomiting, and there are few persons who can take a large draught without this effect. The bitter infusions, drunk freely in quantity, will answer the same purpose.

A consequence of free dilution which should be adverted to is, that by washing out the stomach thoroughly the offending matters are dislodged, and the organ can return to a quiet state without being further disturbed. The retching that continues sometimes is due to the retention of some offending matter in the stomach, and hence, when the operation is thus aided, this retching is relieved. This does not apply in all cases, as the impression that has been made upon the brain and nervous system may be the cause of continued retching, and in this consists the difference between emetics. The sedative articles are most persistent in this respect.

Another result of free dilution may be the conveyance of the article into the alimentary canal, by which a double mode of operation is effected. In the administration of emetics, the subject of the effect of fluid should be duly considered, free evacuation being promoted by it. Should it be desirable to limit the action to the stomach or contiguous viscera, or maintain nausea, restraint must be put upon the quantity allowed to be taken.

The views of Huxham with respect to the use of fluids are worthy of consideration. Speaking of emesis in fevers, he says, "The method of vomiting by mere warm water I do not approve of, as you are oftentimes obliged to swallow down immense quantities before you can raise the vomiting, which sometimes overloads the stomach to such a degree that its force is not sufficient

* Nouveaux Elémens de Thérapeutique et de Matière Médicale, par J. L. Alibert, Paris, 1826, tom. i. p. 218.

† Cyclopædia of Practical Medicine, vol. ii. p. 860, Eng. ed.

for the force laid upon it, and cannot reject it [*i.e.* the water]; so that the more you drink, the less capable it is of doing its office." "In all cases, therefore, if no vomiting follows after having drunk a pint or two, solicit a discharge with your finger or a feather; and by all means beware of that deluge of drink which is too often very preposterously given.* He compares an over-full stomach to the same condition of the bladder, by which inertia is produced.

Contra-indications to the Administration of Emetics.—Where there is decided irritation or inflammation of the stomach, the use of emetics is clearly interdicted. In the case of corrosive poisons, the stomach is either intensely irritated or inflamed, and the efforts of nature made with a view to the expulsion of such articles need only to be assisted by emollient fluids to secure this end and at the same time entail the least damage to the organ. Where irritation or inflammation occurs idiopathically or in connection with disease, the question which was warmly debated, and which gave rise to strong expressions, was the propriety of administering emetics under any circumstances. Broussais assumed the position that all fevers were dependent upon gastritis, and hence the treatment was to be such as would subdue this inflammatory state of the stomach,—as bleeding, leeches to the epigastrium, and diluent drinks. He stigmatized the treatment by emetics and purgatives as incendiary,—as productive of an aggravation of the inflamed condition of the organ and a stimulus to the fever. This assumption has not been borne out by the experience of physicians of previous times or subsequently, which, on the contrary, has confirmed the efficacy of the practice in many cases of emptying the stomach in the early stage of an attack. This applies more especially to the bilious and remitting fevers, which are attended with the disturbance of the stomach and associate organs specified in connection with the indications. The discharge induced from the stomach and other organs is a means of relief to the engorged condition under which they labor, as well as to the congested condition of the portal circle. Emetics in themselves are no source of irritative fever, and their employment cannot be accused of such a result; but, as enjoined by Dr. Chapman, at all times great circumspection is required. Should there be decided evidences of gastric or duodenal irritation or inflammation, determined by red, dry lips and buccal membrane, by a contracted, pointed tongue, especially red on its edges and point, dry and splitting, by thirst, and a feeling of warmth in the epigastric region, which is sensitive to pressure, emetics are uncertain, dangerous, and often pernicious. There may be an aggravation of the local symptoms, and great systemic disturbance, involving the other organs, especially the brain and heart, in the increase of irritation, with fever and accompanying functional derangement. At the time so violent an attack was made upon the use of emetics in fevers by Broussais and his followers, with their entire interdiction, the distinctions between their several forms had not been accurately made; and hence arose the error of using such medication indiscriminately, and the evil results from the practice. This is apparent from the remarks of Barbier,† who wrote before this subject was clearly elucidated.

Determination of blood to the head is a contra-indicating circumstance. It is easy to understand the reason of this when reference is made to the mode of operation pertaining to an emetic. The suspension of respiratory action and retention of air in the chest have the tendency to interfere with the return of blood from the brain; the capillary vessels of the lungs are pressed upon, and impeded circulation of blood occurs in them; while finally, in the act of vomiting, when the abdom-

inal muscles are in full operation, and just as the larynx gives way, the full force of the pressure is brought to bear upon the return vessels of the head. An exaggeration therefore of the determination to the head which flushes the face and injects the eyes may rupture a vessel in the brain. Where free vomiting occurs with discharge of considerable quantities of fluid, which may be furnished by drinks, such accident will be less likely to happen.

In disease of the heart, or aneurisms, the use of emetics is interdicted. They are dangerous remedies in cases of hernia, and should also be avoided in pregnancy, as abortion may be brought on from the persistency of compression on the gravid uterus. Prolapsus uteri may also follow their use. The counsel is given by authorities not to administer emetics during the menstrual period. Where inflammation of the peritoneum exists, the danger presents itself, in the employment of emetics, of mechanical violence done to this tissue by the pressure upon the bowels. At all events, the pain may be much aggravated, and the sufferings of the patient increased, if they be improperly used. The same may be the case in enteritis; and this cause of interdiction may be presented in the treatment of dysentery. In the course of typhoid fever, the occurrence of vomiting may occasion perforation of the intestines. Some other dangers may be alluded to when summing up the risks connected with the employment of emetics. From the exhaustion and syncope induced where the blood is in the peculiar condition fitted for their formation, heart-clots or emboli have resulted. In the treatise of Barbier, some serious cases of gangrene are stated as resulting from the use of emetic substances. These can only be explained under the supposition of emboli in the vessels of the parts affected.‡ Where there is exhaustion from disease, or constitutionally, there is a clear interdiction of them. Dr. Paris alludes to a case where a patient laboring under phthisis was so prostrated by an emetic, with the occurrence of syncope, as not to react from the operation.§ Cases of intolerance of vomiting from idiosyncrasy are occasionally met with, where violent spasms of the stomach or intestines are excited, or where irregular anomalous symptoms present themselves, which if anticipated would preclude the use of emetics.

Means of arresting Vomiting.—The axiom that "vomiting is cured by vomiting" must be received with limitations: it has but partial application. Where oppression and distress of the stomach arise, with the other symptoms that have been specified, from the irritation of offending matters in the organ, the removal of these is followed by relief and a return to quiescence. If, however, either irritation of the mucous surface is left, or the influence of the emetic is so profoundly impressed upon the brain or nervous system as to occasion the prolonged efforts to vomit, a system of treatment must be adopted which is based upon a full appreciation of the cause of their continuance; and hence the diversity of measures that have been proposed to check vomiting.

Where irritation exists, the exhibition of cold demulcent drinks, or antacids, as lime-water and milk, is attended with advantage. An acid condition of the secretions, as exhibited in the dejections, would seem to indicate the use of alkaline remedies. Where vomiting continues from the derangement of the nervous system, obtunding the nerve-centres and placing the whole nervous system in a state of forced quiescence will have the effect of checking vomiting. This is done by the use of opium or its salts, either by the rectum or hypodermically. This plan was adopted by Sydenham, who administered opium after an emetic. Where

* Essay on Fevers, loc. cit.

† Op. cit., vol. i. p. 342.

‡ Op. cit., vol. i. p. 318.

§ Paris, Pharmacologia.

prostration exists in connection with this deranged nutritive condition of the nervous centres, the propriety of using stimulants is clearly presented; and hence the use of alcoholic stimuli, of ethers, or of the aromatics. Sometimes a mild bitter will answer the purpose,—as a weak infusion of calumbo, or cascarilla, or even of Peruvian bark. Carbonic acid is a remedy that is appropriately appealed to in certain cases; and this may be afforded in combination with neutral or effervescent mixture, or the effervescing wines, as champagne, which latter has a double mode of operation; or the use of carbonic-acid water, either with or without an aromatic, is convenient. The application of a stimulating derivative may be used where the skin is cool and moist, as a mustard-plaster to the stomach, which has a reactive effect upon the nervous system, and diffuses the circulation of blood.

Irrespective of nausea and vomiting being occasioned by the use of emetic articles, they may be present as the symptoms of disease. Where they are evidently due to the congestion of the abdominal viscera, the use of cups or a blister to the abdomen, or even the application of leeches, will be serviceable. In this case vomiting is treated by alleviating a diseased state on which it depends, and other measures that are appropriate may be directed immediately to the stomach.

It is a fact that has been overlooked, that nausea and vomiting may be kept up by debility; and in these cases there is exhausted nutrition of the nervous excitomotor tract of the brain. In association with this state of the central nervous masses there is an inordinate susceptibility to reflex actions from the peripheral terminations of the sentient nerves, and hence a susceptibility to the least impression. This may occur from disease which has wasted the forces of life and brought down to the lowest ebb the nutritive operations of the nervous system. It is exhibited in the later stages of cancer and malignant affections, as well as phthisis. It sometimes arises from a predisposing constitutional condition in those whose brains are not duly nourished, and who, when attacked by affections which reflect their influence, exhibit the inordinate sensitiveness by nausea and vomiting. Vomiting is sometimes an attendant upon albuminuria. This has been looked upon as a symptom of uræmic intoxication; but it should rather be regarded as an evidence of the exhaustion of the system by the long-continued drain of albumen, whereby the nourishment of the brain is impaired, which renders it the centre of inordinate reflex activity. Vomiting in albuminuria is essentially brain-vomiting. The reflex disturbing influence frequently comes from the uterus in females, or from the urino-genital organs in males. It cannot be said that the stomach is more than sympathetically involved.

One prominent example may be pointed out, and that is in connection with pregnancy. The vomiting of pregnancy, for the most part, may be alleviated by stimulants or by sedatives, as by camphor and ammonia, or by hydrocyanic acid, as is the usual practice with physicians; but in certain cases of tendency to exhaustion it is maintained, irrespective of the reflex influence of the gravid uterus, from the interference with digestion and the starvation thus induced. The longer vomiting continues in these cases, the greater is the cause for its continuance, until death is threatened from inanition. There is but one method of arrest under these circumstances, and that is radical, directed to the maintenance of due nutrition in the central nerve-masses, to be accomplished in every way that ingenuity can devise. An appeal to the bowels presents the best substitute for the stomach, and by throwing concentrated essences of animal substances, combined with stimulants and tonics, into the bowels, the patient may be saved who otherwise would be lost

or be forced to undergo premature delivery. For nourishment, and with the intention of impressing the system, the most certain remedy is beef-essence, as much as will be retained in quantity, with brandy and sulphate of quinia thrown often into the bowels.

When vomiting is maintained from a purely reflex source, the removal of the derangement that occasions it is the sole resort. In cases of prolapsus or retroversion, the employment of mechanical measures has been found effectual.

When vomiting arises from the brain, the remedies to be employed should be directed to that organ,—as blisters to the back of the neck.

There is a means of relieving the stomach which, in cases of engorgement of the portal circle, is highly efficacious, especially when attended with constipation; and that is by unloading the bowels. This is done by small doses of mercurials gradually administered, or by enemata.

Combination of Emetics with other Medicinal Articles.—As the intention of administering emetics is to evacuate the stomach, they cannot with any advantage be combined with articles not of the same class. The union of different emetics may be advantageously practised, as in the case of ipecacuanha and tartar emetic, or sulphate of zinc, where the one, being more intense than the other, may give force without increasing the danger of over-action. Where there is a union of these articles with those of other classes, as with expectorants or diaphoretics, it is with the design of obtaining their relaxing or sedative influences, and not emetic effects; they then become auxiliaries or adjuvants in carrying out a general indication.

With purgatives the class of articles under consideration are more usefully combined, with the view both to emesis and purgation; and hence the term emetocathartics applied to such combination. Calomel and tartar emetic constitute an effective association, when given in minute doses until nausea and vomiting are produced. This is a mode of thoroughly cleansing the alimentary canal. But, even without inducing vomiting, the presence of a small amount of a nauseant article in a purgative preparation will serve as an adjuvant; and this is frequently taken advantage of. Some of the noted purgative formulæ direct a small amount of tartar emetic or ipecacuanha to be used, with the object of obtaining better results from exhibition.

ORIGINAL COMMUNICATIONS.

A CASE OF FRACTURE OF THE LOWER JAW

TREATED BY THE INTER-DENTAL SPLINT.

BY HARRISON ALLEN, M.D.,

One of the Surgeons to the Philadelphia Hospital.

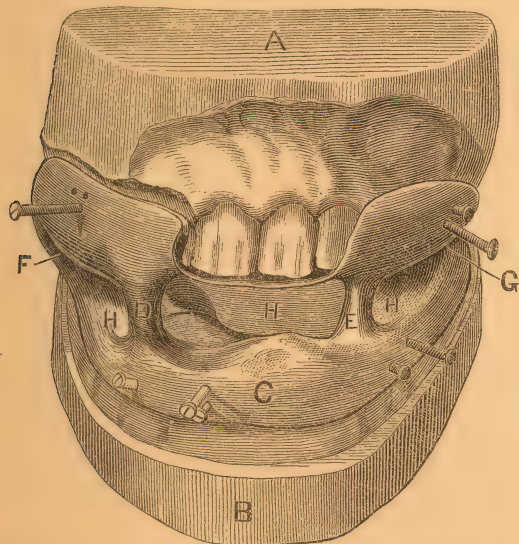
P. B., aged 23, a laborer, entered the Philadelphia Hospital September 2, 1871. Three days before, he had met with an accident, the exact nature of which was unknown. According to his own statement, "he had been knocked down by a locomotive." His face was much contused, and several bruises were noticed about his lower extremities. There was a perforating lacerated wound of the central portion of the fleshy part of the lower lip, and a ragged cleft through the upper border of the oral fissure. The lower jaw was fractured at the left horizontal ramus directly to the median side of the lower canine. The two central incisors and the left lateral incisor were lost. The median end of the left fragment of the jaw was drawn outwards; the correspond-

ing end of the right fragment was drawn inwards. The left angle of the jaw was depressed.

The general condition of the patient was bad. His complexion was sallow, his tongue dry, his pulse rapid, and his intellect—which was at all times dull—became noticeably clouded. Insomnia was absolute. It was thought necessary to order a liberal supporting treatment at once. Nothing was done to the jaw, save to attempt to hold the fragments in position with silver wire until the soft parts had so far recovered as to permit a chin-cap and bandage to be applied. But, in consequence of the semi-maniacal condition of the patient (apart from the mechanical difficulties always attending such cases), the wiring of the teeth was of no permanent use. A general anasarous condition now announced itself. The skin became jaundiced, and there was complete retention of urine.

The use of the inter-dental splint now suggested itself to my mind as a means of holding the fragments in position without pressing upon the soft parts. Accordingly, on the 6th instant, Dr. J. N. Wunderlich, an ingenious dentist of this city, was requested to take an impression of the mouth preparatory to the manufacture of a vulcanite splint. The teeth were again wired together, the dental arch thus restored, and an impression taken in wax, from which a splint was prepared which held, as in one piece, both the upper and

FIG. 1.



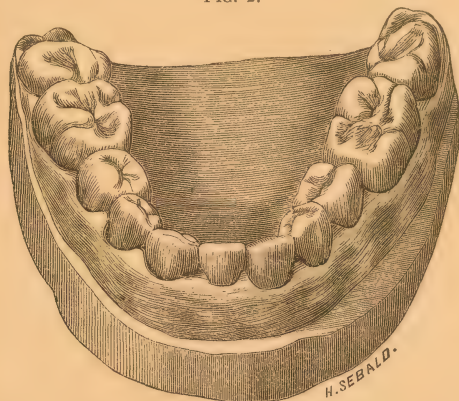
- A, cast of the superior dental arch.
B, cast of the inferior dental arch.
C, the splint.
D, E, pillars of the splint.
F, G, the union of the two halves of the splint posteriorly.
H, H, H, the inter-dental spaces permitting the saliva to escape and the food to enter.

the lower jaw (Fig. 1), and at the same time securely approximated the ends of the broken bone. The apparatus was permanently adjusted September 25. It was for a time held in position by means of screws placed in orifices previously drilled in the enamel of the molar teeth, after the method proposed by the inventor of the splint, Dr. Gunning, of New York. But it was afterwards deemed advisable to pass bolt-like screws through the entire thickness of the splint, at points corresponding to the small normally-present spaces between the cervical portions of the crowns of the molar teeth. This modification held the parts as in a vice, and entirely removed them from the control of the patient. His attempts to tear the splint from his mouth, or to dislodge it by facial contortions (which attempts were limited only by his strength), proved ineffectual. An abscess formed October 10, at a point corresponding to the end of the larger (right) fragment. This was opened on the 12th instant, and a fragment of necrotic bone discovered within. It proved to be an exfoliation from the end of the right fragment at its basal portion. The opening, however, did not close, and in a few days another and larger ex-

foliation was removed, consisting of the remainder of the transverse section, inclusive of the septum between the two central incisors.

The general health of the patient now began to improve, and by October 15 the anasarca had entirely disappeared, and his reason returned; but not acquiescence in the plan which had been adopted for his relief. Notwithstanding that he was fed liberally upon animal broths, his complaints that he was starving were loud and unceasing. By the end of the twelfth week (viz., the latter part of December) the screws were loosened from the lower jaw, and the parts examined. To my disappointment, the fragments were ununited. The displacement, however, did not recur. The apparatus was immediately readjusted,—regardless of the remonstrances of the patient,—and retained until January 23 (about four weeks), when the parts, being again examined, were found firmly united. The stomach-tooth was loose. There being no prospect of its becoming fixed, it was extracted, when the cure was pronounced complete. Fig. 2 represents the inferior dental arch as it appeared at the close of the treatment, prior to the extraction of the left canine tooth.

FIG. 2.



Three teeth are seen between the first bicuspid. These are the two canines, and the right lateral incisor. The left canine was subsequently extracted. The fracture, therefore, had caused the loss of four teeth, viz., the canine, lateral and central incisor of the left side, and the right central incisor.

The patient, after serving as ward attendant for some time, was discharged, at his own request, April 7, 1872.

Remarks.—It is not likely that in this case any other form of splint than the one employed would have accomplished the result in a manner so satisfactory, if, indeed, it could have secured it at all. An external dressing could have been removed by the patient, unless his hands had been constantly tied. Apart from these difficulties, the inflammation attending exfoliation would have prevented the employment of a chin-cap and bandage. It will be remembered that Dr. Gunning employed the same method of treatment in the famous case of Hon. Mr. Seward.

The successful result in the case above recorded is in a great measure due to the unceasing attentions of Dr. Wunderlich.

THE EMPLOYMENT OF CAUSTICS IN THE AMPUTATION OF LIMBS.—M. le Dr. Aubert describes (*L'Abeille Médicale*, June 17; from *Le Lyon Médical*) a method of amputating limbs and of removing tumors by the use of caustics. He uses for this purpose a leaden pipe seven millimetres in diameter, from which he removes a portion of the circumference, so as to transform it into a trough. It is then filled with caustic, and accurately adapted to the periphery of the tumor or to that of the limb to be removed. In some cases these pipes may be passed into the tissues themselves, after the manner of the drainage-tubes of Chassaignac, and in this way the constriction of the tumor or of the limb may be made more complete. The caustic which Dr. A. prefers is the pâte de Canquoin.

ON SOME CASES OF EMPHYSEMA OF THE NECK

DUE TO LESIONS OF THE RESPIRATORY APPARATUS.

BY WILLIAM PEPPER, M.D.

EMPHYSEMA of the cellular tissue of the neck, under any circumstances a rather rare condition, is probably associated in most minds with mechanical injuries of the larynx and trachea. Although, however, it is true that such injuries of the upper air-passages as ruptures, fractures, or incised wounds are usually complicated with emphysema of the neck, it will be found that this symptom makes its appearance under many other and widely-different pathological conditions. The object of the present brief article is by no means to supply a description of cervical emphysema in all its relations, but rather to illustrate a few of its less common varieties, especially such of them as are associated with interlobular emphysema of the lungs.

The occurrence of emphysema in the neck is recognized by the same symptoms which indicate the presence of air in other portions of the subcutaneous tissue: a peculiar crackling on palpation, which is both heard and felt, and a swelling of the part. The condition may affect either one or both sides of the neck; and, in case both sides are affected, may appear simultaneously in them, or may be developed in one first, and subsequently extend to the opposite. There is, as will be seen, a certain amount of diagnostic value in the study of the symmetrical or asymmetrical distribution of the emphysema. The first point at which the air makes its appearance varies considerably: in some cases it is first noticed below the clavicles; in others it appears in one or the other supra-clavicular or submaxillary space; while in most instances it shows itself in the supra-sternal notch, and spreads thence. The distance to which the emphysema extends, and the degree which it attains, are equally variable: at times forming a small and circumscribed crepitant swelling; at others it spreads rapidly up the neck, involving the face, causing frightful deformity, while at the same time it may extend down the arms and over the trunk to the lower extremities, so as to become altogether general.

Emphysema of the neck may proceed from traumatic causes, or may occur in the course of some disease, acute or chronic, of the respiratory organs. In either case, the point where the air escapes into the cellular tissue may be in the larynx or trachea, or in the substance of the lungs. The discussion of this latter class of cases is associated with the question of interlobular emphysema of the lungs, and its consideration will be found to involve some points of marked pathological and clinical interest. In cases of the former variety—where the lesion is situated in the laryngo-tracheal tube—the seat and nature of the disease are usually clear, and the mode of production of the emphysema is evident. The most familiar of such lesions—to which no more than a mere allusion will be made here—are incised wounds of the larynx and trachea, whether accidental or intentional, as in the operation of laryngo-tracheotomy, or in attempted suicide; fractures of the larynx or ruptures of the trachea from external violence, with laceration of the mucous membrane and walls of the air-passages, but not necessarily accompanied with external opening through the skin. Some authorities would class under this head the very interesting variety of cervical emphysema which occasionally occurs during parturition; but, as I am inclined to regard it as due to rupture of the pulmonary air-vesicles rather than of the trachea, I shall for the present postpone its consideration.

There are a few cases on record in which emphysema of the neck has made its appearance in the course of ulcerative disease of the larynx or trachea, and where

post-mortem examination has revealed the existence of a perforation of the laryngo-tracheal tube, enabling the air to escape directly into the subcutaneous cellular tissue. In the following case, which I observed in the year 1865, although the evidence of post-mortem examination is wanting to confirm the view, the lesion was probably of this character.

Case I.—E. S., aged 21 years, was admitted into the Pennsylvania Hospital August 28, 1865. There was no evidence of any hereditary tendency to disease. He had followed the sea for many years, and had enjoyed excellent health until seven months previous to admission, when he was attacked with diarrhoea, which had persisted with varying severity. The stools were at times very numerous,—as many as fifty in twenty-four hours. During this time there was also occasional cough, without hæmoptysis, and with but little white mucous expectoration. He had never had any unusually violent spells of coughing, and had neither strained himself nor been wounded in any way. On admission, he was found considerably emaciated; his countenance dull, speech slow, voice low; but the mind was clear, and the memory good. The pulse was compressible,—ninety in the minute; there were no signs of heart-disease. The tongue was moist and slightly coated. An irregular phagedenic ulcer was discovered between the palatine arches on the left side. The abdomen was tender on pressure, but not distended. The bowels were opened eight times in the twenty-four hours, the passages being small, thin, and free from blood. Cough was infrequent, with little tough mucous sputa. He complained of an uncomfortable feeling along the upper two inches of the right edge of the sternum; and on palpation there was found to be marked subcutaneous emphysema extending over the neck and supra-clavicular spaces, where it was most extreme, and nearly symmetrical on the two sides, and thence over the whole anterior aspect of the right side of the thorax, while on the left side it was limited to the infra-clavicular space. It did not extend to the arms, face, or abdomen. Percussion-resonance was deficient over the right apex, with prolonged and blowing expiratory murmur and increased vocal fremitus. A fine, dry, crepitant râle (like the sound produced by crumpling tissue-paper) was heard over the anterior surface of the right side of the thorax; but this was evidently due to the emphysema of the subcutaneous connective tissue. No friction-sounds were heard. The expansion of the right lung was perfectly free. The percussion-resonance and respiratory murmur were elsewhere normal. The ulcer on the left tonsil was touched with a solution of nitrate of silver. He was put upon the use of cod-liver oil; and at first sulphate of copper, in doses of one-fourth of a grain every two hours, was given to check the diarrhoea; but in about ten days this was changed for small doses of opium and bichloride of mercury. This latter was administered under the view that he was suffering from the manifestations of secondary syphilis; although he would not confess to the primary disease. The emphysema disappeared entirely in the course of ten days after his admission. The faucial ulcer healed rapidly. The diarrhoea improved, the stools diminishing in number to four, and finally to two or three, in each twenty-four hours. He gained strength, and, in the course of the thirty-eight days that he remained in the hospital, increased in weight twelve pounds. At the time of his discharge there was no trace of emphysema of the neck. There was, however, still impaired percussion-resonance over the apex of the right lung, with blowing, prolonged expiratory murmur, and increased vocal fremitus and resonance; although these signs were less distinctly pronounced than at the time of his admission. There were no râles or friction-sounds to be heard at any point.

It may very plausibly be objected that, in the absence of any decisive proof of the position of the lesion in this case, it is too much of an assumption to fix it in the larynx or trachea, since the existence of partial consolidation at the right apex, and the symmetrical development of the emphysema, both suggest the possibility of the escape of air having occurred from ruptured air-vesicles in the right lung. I am, however, strongly inclined to adhere to the opinion first expressed. The physical signs of disease at the right

apex did not give the slightest indication of the presence of softening, such as might possibly have led to the occurrence of interlobular emphysema of the lung,—a condition which, as we shall see, may be followed by external emphysema. Nor had there been at any time during the course of the case coughing-spells of such violent character as to endanger the rupture of any of the pulmonary air-vesicles. I attach little importance to the fact that there were no direct physical signs of interlobular emphysema present, since clinical experience has shown that this condition may exist without either the “dry crepitant râle with large bubbles” or the peculiar friction-sound which were attributed to it by Laennec. The symmetrical distribution of the emphysema is much relied on by some authorities, especially by Demarquay (see his exhaustive work, “*Essai de Pneumatologie Médicale*,” p. 193), as a proof that the air has escaped in the pulmonary tissue, and has traversed the mediastinum to reach the neck, so that it invades this part uniformly.

This cannot, however, be regarded as a point of very great importance, since it is evident that if a perforation should occur near the median line of the trachea on its anterior or posterior surface,—which is indeed the most frequent seat of ulceration,—the resulting emphysema would probably be symmetrical; while, on the other hand, there are cases recorded in which the external emphysema has been much more extensive on one side than the other, although its cause was undoubtedly the rupture of pulmonary air-vesicles.

In favor of the view that the emphysema in the case just reported was dependent on ulcerative disease in the trachea, may be adduced the marked evidence of widespread disease of the mucous surface, as shown by the large ulcer on the tonsil, and by the persistent diarrhœa; the character of the cough; the probability that the affection of the apex of the right lung was due merely to inflammatory action of a low grade; and, finally, the absence of any appreciable cause of interlobular emphysema of the right lung, such as violent efforts in coughing, or the existence of spots of tuberculous softening from which the air might escape into the sub-pleural or interlobular connective tissue. I have already stated my belief, which is certainly supported by the rapid result of the treatment employed, that the wide-spread affection of the mucous follicles in this case was dependent upon a syphilitic taint of the system.

I propose in the next place to report, with brief comments, the histories of a few cases of external emphysema dependent upon lesions of the pulmonary tissue,—a subject of interest, not only as including the question of interlobular emphysema of the lungs, but from its bearing upon the etiology of ordinary vesicular emphysema.

(To be continued.)

DOUBLE PREGNANCY, WITH ONE SAC AND ABNORMAL INSERTION OF THE FUNIS.

BY W. H. WINSLOW, M.D.

I HAVE had a curious case, which presented features rare in the annals of obstetrics, and hence appears to be of sufficient interest to merit its being recorded.

Mrs. B., æt. 24, of nervo-sanguine temperament, slight in form, and pregnant for the fourth time, was taken with uterine pains, simulating labor, at 10 A.M., February 1, 1872, and at 3 P.M. discharged about half a pint of liquor amnii. As the pains were not frequent or severe, she hoped, for economy's sake, to get through without a physician, and did not call me until the next day, when I saw her at 11 o'clock A.M. The pains had increased in frequency and violence, and the patient

was much exhausted. She dated her pregnancy from the early part of October. She had had two abortions previously, at three or four months, and had one child living, aged six years. A digital examination showed the os to be well dilated, slightly shortened, soft and dilatable. I could detect only a spongy mass, that filled the mouth of the uterus and was impelled against the finger during the pains. Fluid extract of ergot was administered in teaspoonful doses every half-hour until three had been taken, with two cups of hot tea.

The pains soon after increased in severity, and I extracted a congested dead fœtus from the vagina and tied the slender cord. In about fifteen minutes the woman said she felt the after-birth, and, getting hold of it by deep burrowing with the hand, I drew it out, and, as it cleared the vulva, there was a voluminous discharge of water, and I found another fœtus kicking among the entire membranes. The necessary attentions were given to the mother, and then the product was carefully examined. In multiple births, the children are so commonly of an imperfect or irregular development, that I was not surprised to find the first-born's head of an idiotic, nearly anencephalous shape. There were dark patches of extravasated blood about its neck and breast, but it was not decomposed: hence its death probably occurred after the first discharge of waters the previous day. The other fœtus was well formed and healthy in appearance, and from the dimensions and development of both I judged them to have had an intra-uterine existence of three months or more. The sex was well defined: both children were females. There was only *one placenta*, large and heavy, which had nourished both fœti, and a *single sac* of rather large dimensions hung from its edges, with no break in the continuity of its circular attachment. There was a slightly-raised line across a one-third segment of the intra-membranous surface of the placenta; yet it was gelatinous, and homogeneous with the reflected portion of the amnion. It would not be unreasonable to suppose that the applied sides of the primitive sacs had been absorbed, destroying the wall between the fœti; the edges becoming fused so perfectly together, as had occurred between the placentæ, as to defy ordinary inspection.

Two discharges of the waters, with such an interval, indicated two sacs; yet this is accounted for by supposing a rapid contraction of the uterus after the first discharge, forcing its contents into and blocking up the passage: hence the mass felt in the os at the first examination. The cord of the healthy fœtus terminated in the ordinary way, a little outwards from the placental axis, but nearly in the middle of the two-third segment, as indicated by the raised line; while the other was attached in a very curious manner. Within three inches of its proximal end it was divided into its three branches, or vessels, each surrounded by a gelatinous coat; and then, *entirely distinct*, they passed along and pierced the inner layer of the amnion two and a quarter inches from the placental edge; dividing into several branches, which ramified between the membranous layers and finally entered the placenta, being distributed to the *one-third segment of the placenta* previously mentioned. This, to my mind, is conclusive in regard to a junction having taken place between two separate membranes at a very early stage of gestation.

It is worthy of notice that this anomalous cord belonged to the imperfectly-formed lifeless fœtus. A single sac in multiple births is an occurrence exceedingly rare and interesting. M. Solte, of Gheluwe, has described one such case, and there are no doubt others upon record; but I have not had an opportunity to look up the literature of the subject. Benkiser has collected, in an inaugural thesis, many examples of a membranous insertion of the cord; and probably every

accoucheur of much practice has met with numerous instances, which he has not considered of sufficient importance to report. In view of the almost perfect development of the products of conception in extra-uterine foetation, we are prepared for any phenomena connected with the generation of the species; and even Darwinism becomes no longer a *reductio ad absurdum*.

2039 FITZWATER STREET.

A CASE OF POISONING BY CORROSIVE SUBLIMATE.

COMMUNICATED BY FRANK WOODBURY.

IN the effort to commit self-destruction, patients frequently, in their anxiety to attain the desired result, take a dose of poison so large that the stomach refuses to retain it. In this manner a large amount of a drug may produce a nugatory effect, where a much smaller amount would have proved rapidly fatal. The case to be described illustrates this apparent paradox, and possesses in addition a peculiarity which invests it with special interest. This consists in the spontaneous recovery from the primary effects produced by swallowing a drachm of the corrosive chloride of mercury in alcoholic solution. Although no antidote or emetic was administered for at least three hours after taking the poison, yet the patient survived its immediate effect, became salivated afterwards, and finally died on the eighth day from asthenia and nervous exhaustion.

Anna H., æt. 33, a native of Scotland, was admitted to the Pennsylvania Hospital on May 11 (Sunday), at 4 P.M. A note from Dr. W. W. Keen stated that the patient had swallowed about two ounces of a liquid used for destroying bugs, which contained thirty grains of corrosive sublimate to the ounce of alcohol. He had not been called until 1 P.M., although the poison had been taken some hours previously. After learning the strength of the solution from the apothecary who prepared it, he gave her eggs immediately, as an antidote. She vomited freely, bringing up blood in considerable quantities. After giving her two dozen eggs, she was sent to the hospital, where ten more were given, all of which were vomited in a coagulated state. She was then ordered a teaspoonful every half-hour of a mixture of the yolk of two eggs with eight ounces of olive oil, and put upon the use of opiates.

May 13.—The diarrhoea, tenesmus, and bloody discharges from which she has suffered since her admission, are gradually subsiding. There is tenderness in the abdomen and in the hypogastric region, but none over the stomach. On being questioned, she states that she does not feel any pain in the stomach, but experiences an uncontrollable nausea on taking food. She complains of inability to retain nourishment, even vomiting beef-tea and milk; of a constant metallic taste, and of a feeling of soreness in the mouth which extends down the œsophagus. She says that she wakes from sleep at night with a start and a sensation as if falling, and that she has flushes of heat, and feels weak; but her mind and memory are unaffected. Pulse 84, feeble and compressible. Hands clammy.

She states that, in a fit of desperation after a quarrel with her husband, she determined to commit suicide. Going to her room without eating any breakfast, having taken merely a glass of water, she swallowed the contents of a bottle of a solution of corrosive sublimate she used for domestic purposes and kept in a four-ounce vial, which was more than half full at the time. Vomiting began immediately, and she fell into a stupor. This occurred between 8 and 10 A.M. She was finally discovered by a fellow-boarder, who summoned Dr. W. W. Keen, after which she was taken to the hospital.

May 15.—She has slept better, though still quite weak, and troubled with the burning sensation in the mouth and throat and with difficulty of deglutition, her stomach still rejecting food. She does not suffer so much with tenesmus, and the diarrhoea and bloody discharges have ceased. The tongue is

thickly coated; the breath is fetid and offensive; and the gums are swollen and tender, showing the constitutional effect of the drug.

On May 18 her pulse failed, and she sank rapidly, dying about 6 P.M.

At the inquest, the post-mortem proved the existence of acute gastro-enteritis. The stomach was softened, inflamed, and discolored from extravasated blood over its entire mucous surface. Several large patches of inflammation were found in the duodenum; the other organs were healthy. Death was evidently due to asthenia, caused by the powerful impression produced upon the nervous system and the grave involvement of the digestive organs.

In reviewing the case, the following considerations are suggested:

I. The drug was in sufficient quantity to exert its corrosive action, as soon as administered, over the entire mucous surface of the stomach. Did not the blood, which was thrown out in large quantity, act by means of its albumen and fibrin as a physiological antidote to a considerable portion of the poison which still remained after vomiting?

II. Did not that portion which was absorbed exert a direct depressing influence, by its power of altering the composition of the red blood-corpuscle and reducing its affinity for oxygen?

III. Was not the absence of any pain in the stomach a grave symptom, as indicating the destruction of the mucous coat and loss of vitality of its nerve-fibres by the primary corrosive action of the poison?

NOTES OF HOSPITAL PRACTICE.

ORTHOPÆDIC HOSPITAL AND INFIRMARY FOR NERVOUS DISEASES.

(1701 Summer Street, Philadelphia.)

SERVICE OF DR. S. WEIR MITCHELL.

Reported by Dr. WHARTON SINKLER.

THIS clinic has furnished a considerable number of cases of neuralgia, hemicrania, and pains which Anstie would not permit us to classify as true neuralgias. The following histories, with Dr. Mitchell's remarks upon them, may possess interest for the readers of the *Times*:

Louisa N., æt. 35, married, applied for treatment at this institution, January 10, 1871. She has always been healthy, with the exception of an attack of rheumatism three years ago. Two months ago she was seized with facial neuralgia, which was first felt in the afternoon. The attack was preceded by a chill, and lasted between one and two hours. After the severity of the pain had subsided, the whole face became flushed. The neuralgia began in the gums, on both sides of the jaw, and extended into the temples and head. Since this time she has had an attack every day. The neuralgia does not come on at the same hour, but on some days the attack begins in the morning immediately after rising, and on others not until 4 P.M. It is always preceded by a chill and followed by flushing of the face and general heat. During the latter part of the attack there is dimness of vision, both eyes being equally dimmed. General health good. No dyspepsia. Eyesight and hearing both good. No cardiac disease. There is no blue line on the gums, and she has never received any blow or injury about the head. There is tenderness on pressure over the vertex and over both supra-orbital nerves, but none over the spine.

She was ordered to take sulphate of quinia, gr. xv, every night, and liquor potassæ arsenitis, gtt. v, three times a day.

On January 14, she reported that the pain had been less severe since the treatment was commenced. There was ringing in the ears from the quinia, and the dose was therefore

reduced one-half. The dose of Fowler's solution was increased one drop three times daily.

On January 17 she was greatly improved, having been entirely free from an attack the day before. After this time there was no return of the neuralgia.

In this case there was absolutely no known cause of disease, nor was she out of health or anæmic when first seized. Moreover, except for the chill, there was no evidence that she had suffered from ague-poison. It was not considered malarial, since it is rare to see a disorder of that nature return so irregularly, while the chill and fever and daily return belong not only to many common neuralgias, but even to some of distinct traumatic origin. Dr. Mitchell remarked on a case of nerve-wound in which there was each morning an ague chill, and each evening a chill which ushered in a neuralgic attack: the latter chill neither quinia nor arsenic relieved. It was also remarkable that the intermittent neuralgias are quotidian unless of malarial origin, when they may assume any of the types of recurrence. Regularity of daily-repeated attacks does not authorize us to consider them due to ague-poison, nor does the co-existence of chill, fever, and sweat, however marked, greatly aid us to settle the cause of the disease.

It was once believed that the curative power of quinia in such cases of neuralgia as recur daily, either at or near a set hour, or even once daily without regularity as to hour, was also some proof of the malarial origin of the affection. Educated physicians in general have abandoned this view; and Dr. Mitchell added that it would be found that the farther from the head are the neuralgic seats, the less power has quinia to control the attacks. On the other hand, he has seen the most well-marked regularly intermittent neuralgias of the fifth nerve yield as readily to simple galvanic treatment as do others of more irregular type. The present case was a fair instance of irregular intermittent neuralgia of the trifacial, yielding to antiperiodics. It was remarked that it is rare to see the pain start from the gums when, as in this case, the teeth are sound; but the starting-point of the pain is often of but little moment, or may even serve to mislead, as in the following case, which was considered remarkable as an example of the necessity, in a case of neuralgia, to examine every organ.

I. C., æt. 52. A man in apparently sound and even robust health. He had lost the last of his teeth three years ago, but could not wear artificial teeth because of the pain they gave him in the upper gums. He was attacked soon after losing his last tooth (an incisor on the right side above) by severe paroxysms of pain, which started from the right upper jaw in or about the point where the gum was most tender on pressure. The pain ran up to the infra-orbital notch, and when most severe broke out also in the supra-orbital distribution. The attacks lasted from a few minutes to a quarter of an hour. On careful examination, the point of exit of the infra-orbital nerve was found to be tender, as was also the gum below it. He had, when seen, twenty or thirty attacks every day. Loud talking was sure to cause them, but the act of chewing food was of all means the most sure to provoke a severe paroxysm. It was found that the pain was not produced by pressure at any point.

Every organ of the body seemed to be healthy in action except the stomach, which was reported as being subject to daily acid dyspepsia. A great variety of treatment, local and general, had been used by many physicians, but so far none had been of service. Previous to using galvanism, Dr. Mitchell directed an absolute milk diet and the use of bismuth and pancreatic emulsion. Immediate relief ensued, and after a month all treatment was abandoned, the patient being well. He has now passed eighteen months with no return of pain.

The remote cause of the condition of nerve on which the neuralgia depended was certainly induced by disordered digestion, and when this was removed the causes which before were competent to evolve an attack ceased to have power. In connection with trifacial neuralgia, originating in or about the alveolar processes, it was observed that such attacks were apt to occur in the old and toothless, and that the site of the worst pain, and often its starting-point, is marked by a hardening of the gums, and a thickening either of the periosteum or of the bone of the lower jaw. Such changes have been assumed by surgeons to be the cause of the neuralgia, and

have led to neurotomy as a means of relief. The hyperplasia in question Dr. Mitchell regards as most often a consequence, and not a cause, of the disease; and he does not consider neurotomy ever justifiable until galvanism has been thoroughly tested.

The following striking case is the more interesting, because it took place in a woman already suffering from general senile changes.

Mrs. P., æt. 64, a gray-haired woman of strong frame, the mother of eleven living children, and with no previous neurotic hereditations, was well until three years ago. She has been at times, and still is, dyspeptic, but the stomachal trouble does not seem to be related in any way to the neuralgia. She has had no recent losses of blood, and was in her usual health when the pain first began. It came on in March, 1869, and may have been due to exposure to a stormy east wind. At first the pain lessened and the attacks became rare, and at last ceased in summer; but in 1870 and 1871 there has been no such marked relief. The pain consisted, and still consists,—for the type is unchanged,—in a horrible pang which starts in the left side of the lower jaw, and seems, as she says, to run along both ways for an inch. The agony seems to the bystanders fearful as she utters a cry and rocks to and fro, or buries her face in her lap, at the same time firmly pressing on the left supra-orbital nerve. This, she insists, always gives her some ease, if the compression be applied early in the attack. This statement proves to be correct, and it is found necessary to press accurately on the nerve to effect relief. The attacks recur every three to five minutes; are made worse by talking and eating; cease in sleep, or are unfelt; are worse in bad winter weather, and best in moderate summer temperatures. Her teeth have been pulled out one by one, as they fell under suspicion of being breeders of neuralgia. Upon examination, the mucous membrane of the left side of the lower jaw was found to be red and swollen, and the veins along the tongue enlarged. The gum and even the bone at the seat of pain were hard, swollen, and tender, and on the left side of the tongue the sense of taste was slow and uncertain; but there, as well as on the lips and chin, the tactile sense as measured by the compass-points was normal. No permanently tender spots were discovered at any of the usual localities, neither was there any tic. Dr. Mitchell remarked upon the fact that the patient came from a malarious neighborhood, and had had chills lately, which in no way affected her pain. All treatment had long since been abandoned as hopeless. At the close of her examination, and while she was suffering frequent attacks of pain, the positive pole of a constant-current battery was applied on the jaw over the painful point, and the negative over the nape of the neck. After a few minutes the pain suddenly lessened, and, ceasing, did not recur for some hours. The sitting was repeated that evening, and it was found that the direction of the current made no difference in the result. Whether the current passed up or down, the pain was relieved by it. As the sittings were continued, the neuralgia returned,—at first, several times a day; then, after the sixth application of galvanism, once a day.

From that time she suffered no further pain so long as she could be induced to remain in the infirmary. Her form straightened, her great physical vigor came back, her appetite grew, and she went about the house busily assisting the nurses and matron,—a strange contrast to the peevish, agonized, worn, and haggard sufferer who had come to us a fortnight before. Two months have passed without a return of her malady, and she has just written (June 15) from her home in Maryland to report herself as doing well in every respect.

In this case no treatment was used except that by the galvanic current. Not more than fourteen Callaud cells were employed, and usually only eight or ten. Most of our neuralgic cases are seen among the poor, and are related to a history of blood-losses or anæmia from some cause. It is usually necessary to use tonics, especially cod-liver oil; but there seem to be cases, such as Mrs. P.'s, in which the pain is the depressing cause, and the battery, by easing this suddenly, causes what might almost be called an outbreak of health. Dr. M. remarked on this fact, and, while insisting with modern neuro-pathologists that the cause of the pain was from some systemic state, said that there were also not a few cases in which no relief

could be hoped for from feeding, toning, or stimulating. In these the origin of the pain is either local or altogether mysterious, but the depressing influence on the blood-making functions cannot be doubted. In such instances the battery often gives at least relief, and helps the patient to regain his lost vigor by simply holding the pain in check. In many it will do more than this, and is a means of relief without which it is now impossible to treat pain with the chance of success we ought to expect.

In the following case, the pain, which was finally shown to be due to cancer, was so distinctly intermittent as to deceive several physicians into the belief that it was of malarial origin. The secondary neuralgia of the ulnar nerve was also a peculiar feature.

Fanny P., æt. 48, married, and has one child. Applied for treatment January 10, 1871. Catamenia ceased one year ago. Has had repeated attacks of quinsy, generally on the right side. Until two months ago she has been perfectly healthy; at this time she received a blow on her right ear, with the open hand. There was pain in the ear the night after the blow was inflicted, and in a week the pain had extended over the head and down the neck. The pain, which is now distressing, is paroxysmal, and generally comes on in the afternoon and lasts the greater part of the night; but sometimes it does not begin until eight o'clock p.m. There is a constant throbbing and cracking sound in the right ear, and when she lies on it the pain is increased, as it is also by a jar or sudden motion. Although the pain extends over the entire head, it is greatest on the right side, and for the past week it has been more intense. The hearing of the right ear is impaired. The soft palate droops on the right side, and when she makes efforts to speak the uvula turns to the left. This is probably due to paralysis, as the right side of it is insensible to the induced current. There is, however, no paralysis of the face. There is tenderness over the mastoid process, and pressure here increases the pain. She has frequent headaches, with occasional vertigo. Opening the mouth is painful, and the jaws cannot be separated to the usual extent. She has fever every alternate afternoon, and has also had chills followed by fever and pain, so as to lead several physicians to treat her for malarial neuralgia. Dr. Mitchell thought it probable that the pain was due to the formation of an abscess in some part of the temporal bone, and ordered a blister behind the ear, and five grains of iodide of potassium, with one-sixteenth of a grain of the bichloride of mercury, three times a day. On January 14 there had been no relief of pain. The patient complained of its being excessive in the face, and also, of late, in the branches of the right ulnar nerve; the pain extending down the outer side of the arm into the fingers, mostly in the third finger.

She was ordered morphia hypodermically, and this gave her some relief the night on which it was used. At the next visit, six leeches were directed to be applied behind the ear. The leeching gave great ease, and she declared that she had slept all night better than she had done for two months before, and could open her mouth more readily.

January 27.—She has been leeches twice since her last visit, and with marked relief each time. After a leeching on Monday, 23d, the pain did not return until Wednesday. She still suffers greatly, and there is tenderness on pressure over the mastoid process. It was thought advisable, if the pain were not relieved by the next visit, to puncture the mastoid cells or to make an issue with the actual cautery. This was the last visit she paid to the hospital.

On March 24 she was seen at her home, and stated that she had become so much worse that it was impossible for her to leave her bed. After suffering acutely for three weeks, an abscess ruptured in her throat, and about half a pint of pus was discharged. The pain was immediately relieved, and since has gradually diminished. Although greatly debilitated, she is steadily improving, and feels no discomfort about the ear.

A short time after this report was made, the trouble returned, and the patient went to the Episcopal Hospital, where she died on August 27, 1871. The following notes of the post-mortem examination were kindly furnished by the resident physician:

"Autopsy made three hours after death. Three of the superficial cervical lymphatics on the right side were enlarged

and presented a scirrhus appearance. The larynx and œsophagus were normal. The parotid gland of the right side was enlarged, indurated, and firmly attached to the surrounding bones. After removing the gland, the ascending ramus of the inferior maxillary bone was found roughened and partially absorbed,—the condyle almost completely. The bodies of the upper cervical vertebræ in connection with the gland were eroded, as was its attachment to the base of the skull. Upon microscopic examination of the gland, all the characters of scirrhus were indicated."

The following case is curious, because there was a distinct history of syphilis, while the pain had a more immediate relation to gastric conditions, and it was relieved chiefly by induced currents. It is interesting to contrast the slower result thus obtained with the remarkably speedy relief in the case of Mrs. P., just quoted from our case-books:

Benjamin H., clerk, applied for treatment March 3, 1871. Came to this country from England in February, 1870. Three or four years ago he contracted syphilis, and has experienced the secondary effects of the disease: he has now a specific psoriasis on the legs. In May last he had a slight speck on the cornea, but had no other trouble until November, when he began to have attacks of neuralgia. The pain commenced below and external to the left eye, and in the infra-orbital nerve. It came on in the afternoon, and ended in headache, which was confined to the left side of the head. The neuralgia is now in the left supra-orbital nerve alone, is very severe, and the headache which follows the attack may occur in any part of or over the entire head. There is more or less neuralgia every day, but it never begins until after dinner. Unusual use of the eyes hastens an attack.

His appetite is poor, and digestion imperfect, the food being passed undigested. Much acidity of the stomach, and heartburn, exist. He vomits now and then, but only after the headaches, to which he says the vomiting is due. His general health is only moderately good.

He was directed to take subnitrate of bismuth, bicarbonate of soda, and compound tincture of cinchona, three times a day, and an application of the primary induced current was made over the supra-orbital nerve by means of the metallic brush, the skin having been previously made thoroughly dry by flour dusted over the surface. The neuralgia which was present at the time the application was made was instantaneously relieved.

March 7.—He was much relieved by the application of electricity; the pain did not return for a couple of hours, and then was less severe. The digestion is better. Electricity was again applied.

March 14.—Improvement marked and continued.

March 24.—For the past two days the pain has been greater, but by no means so severe as when he first came under treatment. An application of dry faradization immediately banished the pain.

March 28.—He has had no return of the supra-orbital neuralgia, but has a slight pain in the ball of the left eye. He was ordered five grains of iodide of potassium three times a day, as his digestion is good.

April 4.—Still no neuralgia, but the pain in the eyeball continues. The dyspeptic troubles have returned in a slight degree: he was therefore directed to discontinue taking the iodide of potassium, and return to the bismuth, soda, and bark.

This patient was seen three or four months after the treatment was discontinued, and he had had no more neuralgia.

EFFECTS OF EXTENSION OF THE NERVES ON THEIR IRRITABILITY.—G. Schleich, in the *Zeitschrift für Biologie* (The Academy, June), records a considerable series of experiments made with the object of determining the effect on their excitability by stretching nerves with various weights, and states that moderate extension of the nerves of the frog, the extending weight being about forty grammes, causes no material diminution of its excitability; when, however, the weight exceeded this amount, the excitability rapidly diminished. In some instances slight extension seemed to augment the excitability of the nerve. Muscular contractions were often observed when the extending weight exceeded thirty grammes.

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EDITORIAL.

MEDICAL JURISPRUDENCE.

THE progress of medical science during the last quarter of a century has naturally led to a closer attention to the subject of forensic medicine. We need not stop here to insist upon the importance of this study, both to the physician and to the lawyer: in both these professions, the experience of every day fully demonstrates this. But it may not be amiss to bring to the notice of those who have not thought about the matter, the comprehensiveness of the subject in its general details.

It may be safely asserted that there is no department of medicine which is not laid under special contribution, at one time or another, to aid the cause of medical jurisprudence. We will suppose the case to be—one of frequent occurrence—the identification of a dead body, discovered under suspicious circumstances, with marks of violence upon it. In the first place, in order to perform the autopsy, a knowledge of *anatomy* is essential; then, properly to understand the significance of certain wounds, fractures, luxations, etc., an acquaintance with *surgery* is requisite; or, should the examination negative the idea of violence as the cause of death, then a knowledge of *pathology* is most important to aid the examiner in determining what alteration of structure—what internal lesion—has occasioned the extinction of life.

Should the case be one of that numerous class involving the sexual relations,—such as pregnancy, suspected or concealed, criminal abortion, infanticide, legitimacy, paternity, or rape,—a knowledge of *obstetrics* becomes indispensable in deciding the question at issue. Again, should the expert be required to give an opinion on that most intricate and perplexing of all the questions claiming the attention of the physician,—mental disorders,—how can he hope to unravel the tangled web without some familiarity with the *psychological* actions of the economy? We all know how frequently such cases occur, both in the civil and criminal courts: in the former, where the question of civil responsibility is raised; and in the latter, where the question of criminal responsibility is so often the point at issue, as a bar especially to capital punishment.

Then, again, should the case lie in that extensive field of criminal jurisprudence embracing murder by

poisoning,—a crime frequently committed with such skill and subtlety as to defy detection,—how absolutely indispensable becomes the knowledge of *chemistry* to him who would desire to aid the cause of justice! Thus we see how most, if not all, of the branches of medical science, contribute their quota to the building up of the fabric of medical jurisprudence.

Such being the case, we cannot but deem it a mistake with most of our American schools of medicine to devote so slight an attention to this branch of science. In many of them it is but a mere *attaché* to some other department of study, tacked on to give effect to the printed curriculum of the college. In some schools it seems to be entirely ignored, not even the name of the branch appearing in their annual announcements. It is very different in the European schools, especially the continental ones. Those of Germany and France may be particularized in this respect. Among the great medico-legal authorities of these two countries, of the past and present generations, we need only mention the names of Casper, Marc, Orfila, Foderé, and Tardieu as lights in this department of science. We venture to express our hope that the time is not far distant when, in all our schools, an acquaintance with medical jurisprudence will be deemed an essential to graduation.

In our present article, we are more especially interested to bring before our readers certain points connected with *toxicology*. It must be evident to every observer that the crime of poisoning is alarmingly on the increase in this country. The facilities for procuring the more common poisons, the ease with which they can be administered, and the fact of the strong resemblance of the symptoms occasioned by many poisons to those of disease, will easily account for this. But this very circumstance only makes it the more imperative on the part of the forensic physician to exert his utmost skill in detecting the poison. Such has been the progress of chemical science within the last twenty or thirty years, that we may assert that mineral poisons may nearly always be infallibly discovered after death, *provided* they have not been previously ejected from the body, and *provided* the death has not been postponed sufficiently long to allow of the total elimination of the absorbed poison. With the organic poisons—the alkaloids, for example—the case is different. For some of these, there is, as yet, no known chemical test. For the identification of such, we are obliged to depend chiefly upon their sensible and physiological properties,—more particularly as exhibited on animals. Only a few of them have, thus far, been detected in the blood, the organs, and the secretions. Nor is it always possible to discover them even in the stomach after death; although every year is adding to our stock of knowledge, in this line of research.

There are certain practical difficulties in the way of justice, when the point at issue is the detection of poison by the toxicologist. One of these difficulties is the impossibility of always procuring a competent analyst for the examination. It becomes necessary to send the suspected materials, often to a great distance, to a prop-

erly-qualified chemist. Then, in nearly all important criminal cases of this character, expert witnesses are summoned, especially by the defence, whose object is to neutralize and break down the chemical evidence for the prosecution. This frequently leads to a perplexing conflict of scientific opinions, unless the presence of the alleged poison has been most positively and unequivocally demonstrated by the prosecution. To remedy this difficulty, various plans have been proposed; one of which is that the State should appoint one or more competent toxicologists, properly salaried, whose especial duty it should be to make the proper chemical analysis in every case of poisoning brought before the courts, and to report thereon. Such a plan would, however, only partially obviate the difficulty first mentioned: it might, it is true, insure a correct analysis, and so far satisfy the demands of justice; but it would still leave the accusation open to rebuttal by the expert witnesses called by the defence; and this very rebutting testimony exposes the witnesses on both sides to the charge of partiality and partisanship.

To meet this contingency, a plan was suggested by Prof. Henry Hartshorne at the last meeting of the American Medical Association, viz., "that in important criminal cases, requiring the evidence of medical or chemical experts, the cause of justice will be promoted by the appointment by the court, in every such case, of a commission of experts, empowered to collect all purely scientific testimony bearing on the case, and report upon it to the court by which the case is to be tried." The author of this suggestion supposed that the appointment of such a commission would do away with the necessity of summoning the expert witnesses in such criminal cases; but although we regard his proposal as an excellent one, and possibly the best that could be adopted, yet we can imagine a difficulty that might be urged in the way of its adoption, namely, that it deprives the accused party of the privilege of summoning his own scientific witnesses. But this is met by the reply that the commission of experts should be sworn to execute their trust "without fear or favor."

The next point for discussion has reference to the *compensation* to be made to the scientific witnesses. Probably no set of men are more imposed upon, in the way of receiving adequate compensation for their services, than medical and chemical "experts." It makes but little difference whether they be called for the prosecution, or for the defence. In the first case, the State, or rather the county, is represented by a junta of men called, in Pennsylvania and some other States, "county commissioners," and in New Jersey "the board of chosen freeholders." These persons, as a general rule, are totally incompetent to affix a proper valuation either upon an exhaustive toxicological examination, or upon an expert opinion—the result of years of study and research: hence they will often think a fee of fifty or a hundred dollars to be a very ample compensation for work which is legitimately entitled to five or ten times that amount. The petty quibbles, subterfuges, and often downright tricks, that have come under our personal

knowledge, in this connection, are certainly not very creditable to the "public servants" above alluded to. We will mention a few of these, of no very pleasant reminiscence to ourselves, as the victim of this low species of dealing.

Some years ago, we were called upon to make a chemical analysis of the stomach of a person supposed to have been poisoned by arsenic; and an immediate examination was urgently requested. The poison was discovered without difficulty, in very large amount, and the report of the analyst was sent up to the county authorities, with a moderate bill for the work. This bill was totally ignored, and payment refused, by a technical quibble, on the ground that the Justice who had acted as coroner at the inquest resided either within, or without (we forget which), the exact legal boundary of the coroner's jurisdiction! It so happened that just one year later there occurred another case of poisoning in the same county (Perry), and the request was again made for a similar service, through a respectable physician of the place, with the promise by the authorities that proper compensation would be made. With a mistrust natural under the circumstances, we felt justified in first insisting upon a written guarantee from the county commissioners for the payment of the full fee, on the completion of the analysis and the rendering of our testimony at court. The contract was faithfully performed on our part; but when the other party was called upon to "make payment," some quibble was again raised, and we were actually compelled to bring suit against the county, and pay a lawyer's fee, before we could recover! In Camden County, New Jersey, a similar difficulty was experienced. In a case of suspected poisoning, where the court, then in session, had ordered a chemical examination to be made, *having first agreed upon the terms*, the "board of freeholders" subsequently rejected the bill for professional services, as being *in their opinion* too high, and compelled the analyst to sue the county, at considerable expense and loss of time to himself!

Even in our own city, matters are not much better. The court, for example, or the district attorney, orders a chemical analysis, in a case of alleged poisoning. The work is carefully and scientifically performed; the report is handed in; and, possibly, the analyst gives his testimony in court. But he finds it much more difficult to get his pay, than even to make his tedious analysis. In the first place, he must apply to the "Commissioners" to countersign the order of the judges; next, he must lay the Commissioners' order before the City Councils. These gentlemen will probably criticise his bill as being "exorbitant;" at all events, they will refer it to the "finance committee," before whom he may be compelled (according to our own experience) to appear more than once, and argue his own cause; and even submit to a paltry deduction from his just claim!

One other incident in our "experience" we will relate, as it very conclusively shows the direct bearing of this question of *compensation* upon the great ends of justice. Not long since, a woman living in Hunting-

don County, Pennsylvania, was arrested and put in prison on the charge of poisoning her mother-in-law. An autopsy of the deceased was made, and the stomach and other viscera were forwarded to Philadelphia, with a request for us to make the necessary toxicological examination. As in the former cases, we first required the proper authorities to guarantee the payment of a stipulated fee on the completion of the work and the rendering of testimony (should it become requisite) at court. To this they at first demurred, but subsequently concluded to sign an agreement for the payment of a certain amount for the analysis alone,—a less sum than the one first proposed,—and then wished it left discretionary *with them* as to what they would pay the analyst in case he should find the poison, and be compelled to go to court and testify in the case. To this latter arrangement we very decidedly objected, not being willing, after our past experience, to trust at all to the tender mercies of "county commissioners." We almost blush to record the fact, that more than ten weeks was consumed in fruitless attempts, on their part, to carry their point; and at last the *material* was returned unopened to the person who had sent it, with a positive refusal to have anything to do with it, under the circumstances. Now, we submit that here a most flagrant wrong was inflicted upon the prisoner, who was kept in unnecessary suspense and confinement, simply because "the commissioners" would not agree to the terms of the analyst. Certainly, no one will say that *he* was bound to do this work except upon his own prescribed terms (the same precisely as those of other chemists). Moreover, they could have applied, if so disposed, to other toxicologists. But no: the prisoner, who was possibly all the time innocent, must be subjected to this unnecessary detention, under the dreadful charge of murder, simply because of the unwillingness of the authorities to pay the usual professional charge for the analysis! It seems to us that the party aggrieved, if not proven guilty, would have a very just cause for an action against the county for illegal and unnecessary detention in prison.

Now, we think it is high time that some change for the better, in this direction, should be instituted. It is simply scandalous that professional men should be subjected to such contemptible annoyances, in the matter of their pecuniary compensation. When we consider, moreover, that these services are rendered in the most important of all cases,—those involving life and death,—and that, without their aid, the ends of justice must be defeated, the wrong here complained of is seen to be still more intolerable, and one the more urgently demanding redress.

OUR ANNUAL WATER-FAMINE.

IN the Annual Report of the Board of Health of this city for 1871, the following passage occurs:

"It cannot be denied that, at seasons of the year when a free use of water is most essential to the well-being of the

community, there has been a scarcity, which has seriously interfered with the comfort, if not the health, of citizens, and formed a just ground of complaint. This evil has, we understand, been remedied for the limited future; but with the increase of consumption necessarily consequent upon the increase of population, the question arises as to whether the present source of the supply will be adequate to the increasing demand."

This is certainly mild language. For years, every summer has seen a water-famine in this city, with two great rivers flowing past it. Property-owners are heavily taxed to raise millions wherewith to maintain a water department, which yet fails so egregiously that by the 1st of July there is scarcely a house where a bath can be drawn in the second story. We think the Board of Health might better have used far stronger language.

Under the present system, if we are rightly informed, it takes fourteen gallons of water, as power, to raise one gallon into the reservoir at Fairmount. Failing the full quantity or head of water, this great city, with really an abundance of water, has to call upon its Fire Department, or to send to *New York*, for the steam-power which ought to be permanently on hand, and in order, to keep the reservoirs pumped full.

We would urge that this whole matter demands investigation; that the proper authorities should invite suggestions, or, if need be, proposals, for so remodelling our entire system of water-supply as to make these water-famines impossible. The means which were quite adequate to the furnishing of water to a city of one or two hundred thousand inhabitants, occupying an area of about ten square miles, will entirely fail to answer the needs of a population of nearly a million, spread over an area of one hundred and twenty square miles.

The mere multiplication of reservoirs will not remedy the evil of which we complain. What is wanted is an unfailing source from which to obtain water, and such mechanical arrangements as will insure an abundant supply of it for distribution the whole summer through. Unless, which we do not believe, modern engineering skill has been exhausted already in the service of the Philadelphia Water Department, the people should demand of that Department a far more efficient discharge of its responsibilities.

DR. R. J. LEVIS, and Dr. A. D. Hall, the writer of the admirable letters on "Ophthalmology Abroad" which have recently appeared in this journal, were on Wednesday last reinstated in their positions of Attending Surgeons to the Wills Ophthalmic Hospital. This is simply an act of justice to these gentlemen, since no charge of incapacity or of negligence has ever been brought against them. Inasmuch, however, as the hospital contains only forty beds, it is to be hoped that the energy of the Board of City Trusts will hereafter manifest itself in some other way than in making any further additions to the medical staff, which now numbers ten surgeons.

PROCEEDINGS OF SOCIETIES.

BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES.

JUNE 3, 1872.

VICE-DIRECTOR JAMES TYSON, M.D., in the chair.

PRESENT, Messrs. I. Norris, Wells, McQuillen, J. G. Hunt, Buckingham, and Richardson.

Donations of photographs of the 9th and 10th bands of Nobert's test-plate, and also of a "Report on Two Cases of Cancer," were received for the museum of the Section from Col. J. J. Woodward, M.D., of the Surgeon-General's Office, Washington, D.C.

On motion of Dr. J. G. HUNT, it was ordered that a vote of thanks be transmitted to Dr. Woodward for his generous contributions to the museum of the Department.

Dr. HUNT inquired of the members what they thought was the comparative value of the two similar plates accompanying Dr. Woodward's "Report on Two Cases of Cancer," and stated that he believed the doctor was desirous of obtaining the opinions of practical microscopists in regard to the relative perfection of the two modifications of the Albettype process therein employed. After some discussion, the subject was postponed, to allow a thorough inspection of the prints.

The Director, Dr. TYSON, then requested Dr. Hunt to take the chair, and proceeded to read an interesting paper on Urinary Microscopy, especially with regard to its value in the diagnosis of disease without the aid of a chemical examination of the fluid.

On motion, it was referred to a committee composed of Drs. McQuillen, Richardson, and I. Norris.

Dr. RICHARDSON endorsed the views contained in Dr. Tyson's paper as quite in accordance with the results of his own experience, and strongly expressed his conviction that it was just as foolish to expect in any case that the microscopic investigation, alone and unaided by a knowledge of the history, local and general symptoms, hereditary tendencies, etc., should solve all the problems of renal disease, as it was to depend exclusively upon a stethoscopic examination of the lungs when required to make a diagnosis between the various pulmonary affections.

Dr. HUNT remarked that it seemed to him we had quite too much neglected the study of the pathological structure of the kidney as connected with disease of the urinary organs.

Dr. MCQUILLEN inquired whether any of the members present had attempted to make an injection of the kidney from a case of Bright's disease, and, if so, whether they had succeeded in injecting the Malpighian corpuscles.

Dr. TYSON said that he had not as yet attempted to inject kidneys from well-marked cases of Bright's disease, and added that in healthy human kidneys he had found the cold injection of Prussian blue, as advised by Dr. Beale, to work well, although for some unexplained reason it was more difficult to obtain a good result in the kidney of man than in that of the pig.

Dr. RICHARDSON mentioned that some ten years ago Dr. Wm. F. Norris and himself, whilst resident physicians to the Pennsylvania Hospital, had made numerous more or less successful experiments at injecting human kidneys,—one of which was, he believed, from a case of Bright's disease in its early stages. He thought, however, that in many examples of that affection, especially when marked cirrhosis of the organ existed, it would be impossible to inject the Malpighian corpuscles, on account of the obliteration of their vascular tufts by the contraction of their thickened capsules.

Dr. HUNT stated that he also had experimented in the injection of kidneys, but had been much dissatisfied with the syringes now in use, and believed that only some modification of the water-pressure or air-pressure apparatus could answer the purpose efficiently.

Dr. TYSON observed that the process with the acid carmine injection advised by Dr. Beale had utterly failed in his hands, and he did not see how any form of apparatus, or any manip-

ulation of the fluid, could render it a satisfactory mode of injecting.

Dr. MCQUILLEN said his object in asking the question was on account of the fact that he had failed in an attempt to inject a kidney handed to him by Dr. William Pepper, with the statement that the patient died in the Philadelphia Hospital from Bright's disease. Every step in the performance of the experiment had been conducted with the greatest care. It was the first and only time, however, that he had endeavored to inject a human kidney; and he wished to know whether the result was due to a change in the structure of the organ, or to inexperience on his part; having injected a number of sheep's kidneys prior to this, and with uniform success, he had been disposed to attribute the result to the former rather than the latter cause.

Dr. HUNT thought the difference in favor of Dr. Beale's results might be attributed to his scrupulous care in using none but fresh animal tissues.

Dr. MCQUILLEN remarked that in his experiments upon the kidneys of sheep he had taken great pains to insure this important condition for success, visiting slaughter-houses to procure his specimens immediately after the animals had been killed, and proceeding at once, without loss of time, to inject the vessels. His results had in consequence been, as a rule, very satisfactory, even his first attempt proving a successful one.

Dr. TYSON further observed, in reference to the acid carmine injection, that, whilst he recognized the advantage of staining the germinal matter of the vessels with an ammoniacal solution of carmine, and then filling the blood-vessels with Prussian-blue fluid, he looked upon this mode of procedure as quite a different method from the process with the acid carmine mixture.

Dr. HUNT called attention to a specimen he had arranged beneath one of the microscopes, exhibiting a transverse section of some of the gastric tubuli of the pig's stomach, remarking that it was still a mooted point whether two sets of glands did exist in the stomach; and, although he had of late years made numerous investigations for the purpose of determining this question, he did not as yet feel satisfied in regard to it, although so far at least he had been unable to detect more than one kind of these glandular organs.

Dr. TYSON said that the literature of the subject, which he had recently had occasion to consult, was very much involved, and that he believed a rich field was open for research in this direction.

REVIEWS AND BOOK NOTICES.

LECTURES ON THE CLINICAL USES OF ELECTRICITY. By J. RUSSELL REYNOLDS, M.D., F.R.S., Professor of the Principles and Practice of Medicine in University College, Examiner in Medicine to the University of London, Physician to University College Hospital. 12mo, pp. 112. Philadelphia, Lindsay & Blakiston, 1872.

ELECTRICITY IN ITS RELATIONS TO PRACTICAL MEDICINE. By DR. MORITZ MEYER, Royal Counsellor of Health, etc. Second Revised and Corrected American Edition, Translated from the Third German Edition, with Notes and Additions, by WM. A. HAMMOND, M.D., Professor of Diseases of the Mind and Nervous System, and of Clinical Medicine, in the Bellevue Hospital Medical College; Physician-in-Chief to the New York State Hospital for Diseases of the Nervous System, etc. 8vo, pp. 506. New York, D. Appleton & Co., 1872.

The demand for a second edition of Dr. Hammond's translation of Meyer's Medical Electricity, following closely upon the publication of several recent works on the same subject, both British and American, evinces on the part of the profession a wide-spread interest in electro-therapeutics, and gives rise to the hope that electricity as a remedial agent is about to be reclaimed from the degradation into which it has fallen, and—the proper bounds and limitations of its usefulness becoming more clearly defined, the methods of its employment

better known, and the necessary apparatus cheaper and more manageable—that it will, before long, assume its true position with the profession at large as a familiar instrumentality in the intelligent and scientific treatment of disease.

Several corrections in typography are made in the second edition of this valuable treatise, and an inaccurate statement in reference to Ohm's law of the relation of the strength of a galvanic current to the motor power and the resistance is corrected: "the strength of the current equals the electro-motor power *divided* by the resistance," instead of "*multiplied* by," as in the first edition (p. 19).

In an appendix, Dr. Hammond calls attention to certain improved forms of electrical apparatus for medical use, which have been introduced by the Galvano-Faradic Manufacturing Company of New York, since the publication of the first American edition. Some of these are remarkably elegant and efficient instruments for employment in electro-therapeutics, and a detailed description of four of the more important of them, and of an extended variety of electrodes, is not considered out of place.

Dr. Reynolds' little book, as we are informed in the preface, is a republication of the course of lectures which he delivered in University College Hospital during the summer of 1870, and which first appeared from short-hand reports in the *Lancet*. His object has been to render them strictly practical, by avoiding all trespass upon debatable ground, and confining his remarks as closely as possible to ascertained facts with regard to the clinical uses of electricity in the diagnosis and treatment of disease. The plan laid down is somewhat narrow, and it is closely adhered to, so that, although the principle of unity in book-making is observed, much that is indispensable to the comprehension of the subject is omitted, and we have rather a concise summary of the practical knowledge of electricity at the time the lectures were delivered, convenient for reference in the hands of the practitioner, than an exhaustive consideration of even the clinical uses of this potent agent, such as is needed by the student of science or the specialist.

The local employment of electricity in the various paralyses,—1st, from cerebral disease, 2d, from spinal disease, 3d, local or peripheral paralysis, 4th, hysterical paralysis, and, 5th, lead or toxic paralysis,—together with its use in spasmodic diseases and neuralgia, occupies the greater part of the volume.

"In all cases of *hysterical* paralysis, whatever may be the distribution of the symptoms, electricity is of the highest service; and faradization or franklinism is found to be more efficacious than galvanism." (Page 81.)

"In the neuralgiæ, electricity is often of considerable service. It is the continuous galvanic current which you should use, and it should be of only such strength as to be just perceptible by the patient; it should be applied to the part with well-wetted sponges, and should be applied for a short time only, but with frequent repetition." (Page 97.)

The entire subject of general electrization, except by static electricity, is omitted. Yet this is among the most valuable, if indeed it is not *the most valuable*, of all the uses of electricity in medicine. General electrization by the faradaic current has rendered most efficient service in very many of those mysterious nervous diseases in which, even in post-mortem investigation, no *locus morbi* can be found; the results which follow its employment in functional paralysis, epilepsy, certain forms of neuralgia, hysteria, and hypochondriasis, are often extremely gratifying; and there is no doubt of its value, as a general tonic, in diseases dependent upon or associated with feebleness of the vital processes and impairment of nutrition.

The uses of electricity in clinical surgery—*electro-surgery*, as it has been called—are not considered. In an appendix, Dr. Reynolds enumerates the requirements of an "electrical room," whether in hospital or for private practice.

PRACTICAL SUGGESTIONS IN NAVAL HYGIENE. By ALBERT LEARY GIHON, A.M., M.D., Surgeon U.S. Navy. Pp. 151. Washington, 1871.

This valuable little work emanates from one who has had ample experience through years of continuous service in times of peace and war, and an intelligent appreciation of the great need of a sanitary code for guidance on shipboard. For a

long series of years naval hygiene has been more a matter of "custom of the service" than of common-sense regulation, and the suggestions of the surgeons have frequently been unheeded, as Dr. Gihon truly remarks, because of the habitual use by narrow-minded officers of the power at their command to resist what they pretended to consider encroachments upon their jurisdiction, and a dread that the medical officer might transcend his position. These small jealousies doubtless prevail in the naval service of every country, and any authoritative guide which rests on the score of attention to the health of officers and seamen, and is not a mere reflection of the sentiment of the medical corps in contradistinction to that of the other corps, should receive a warm welcome. Beginning with the subject of the examination of recruits, careful directions for which are given for the benefit of the young surgeon especially, the author next passes through the receiving-ship and the navy-yard to the ship itself, which is to be for a while the home of the sailor, and in which ventilation, clothing, light, personal cleanliness, food, water, sleep, exercise, moral and climatic influences,—all of which are here discussed,—operate as so many elements of health or disease, according as hygienic rules are observed or neglected. We learn that the greater number of our national vessels are overcrowded with men, and the numerous inconveniences attendant upon such vitiation of the atmosphere therefore demand all the care and attention which can be bestowed upon them. Valuable suggestions are offered by Dr. Gihon on the proper employment of ventilation and light as hygienic means, and many improvements suggested in regard to the food and the mode of dispensing it, not the least important of which is a proposed modification of the hours of meals, which are now usually furnished at eight, twelve, and four o'clock, the men thus eating three times within eight hours, and fasting all the rest of the day, during which they perform some of their most laborious work. The author states that "the sailor of to-day is not the brute of fifty years ago. The barefooted, abject, illiterate being whose back bore the scars of the cat is not recognizable in the well-dressed, tidy, manly-looking seaman who receives his letters and papers regularly from home, and signs his name legibly to the shipping articles." Let us hope that the same civilized sentiment which has effected this improvement may lead to an equally watchful care over his hygienic condition, and that the advice given by Dr. Gihon, based on his own experience in the service, may not remain unheeded by those in authority.

The book is a very readable and ably-written little work, and should interest every member of the profession. It concludes with a large number of sensible sanitary regulations for the navy and for transports, proposed by the author, many of which will doubtless be incorporated—though not perhaps until after the lapse of many years—into the rules of the service by official order. In a letter introductory to the work, Dr. Ruschenberger, one of the most honored surgeons in the navy, and universally respected in and out of the service, states that Dr. Gihon should not expect to see his suggestions adopted at once, but that he may reasonably hope that by the time those young aspirants for renown in the navy, who are now just entering the Naval Academy, are captains and commodores, the truths which he sets forth so well will come to be considered worthy of attention. We do not ourselves doubt that a long interval of time will supervene before their value will be thoroughly understood and appreciated in the "Circumlocution Office."

THIRD ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF MASSACHUSETTS. Pp. 329. Boston, 1872.

EIGHTEENTH REPORT UPON THE REGISTRATION OF BIRTHS, MARRIAGES, AND DEATHS IN THE STATE OF RHODE ISLAND. Prepared under the Direction of John R. Bartlett, Secretary of State, by EDWARD T. CASWELL, M.D. Pp. 96. Providence, 1872.

So few of the States seem to make the health of their population a subject of special study, that we take pleasure in referring to any one of our great Commonwealths which relinquishes once in a while politics for hygiene. There are hundreds of items of general interest associated with the preservation of the health of every community, and we are therefore surprised that State Boards are such extreme rarities.

That of Massachusetts has already exhibited the value of systematic watchfulness over the physical condition of its people, and of the importance of the collection of vital statistics. If such a body can be kept free from the contaminating influence of politics, so much the better, although the insidious influence of the latter seems to pervade almost every branch of art and science. We see nothing, however, on the face of the Massachusetts report to induce even a suspicion that its value is impaired by such a disturbing element. The duties of the State Board of Health of this Commonwealth are important from the very nature of the powers assigned to it. Its general functions are embodied in the care of all interests affecting the life and health of the citizens, and it is expected to make sanitary investigations and inquiries in respect to the people, the causes of disease, and especially of epidemics, and the sources of mortality and the effects of localities, employments, conditions, and circumstances on the public health. It also advises the State government in regard to the location of any public institution. The annual report recently published contains a valuable series of papers, the most important of which are those on "Arsenic in Certain Green Colors," of wall-paper especially, by Dr. Frank W. Draper; "The Use and Abuse of Intoxicating Drinks throughout the World," by Dr. H. I. Bowditch; "Proper Provision for the Insane," by Dr. Edward Jarvis; "The Use and Abuse of Opium," by Dr. F. E. Oliver; "Effects on Health of the Use of Sewing-Machines," by Dr. A. H. Nichols; "Slaughtering, Bone-boiling, etc.," by George Derby; "Vegetable Parasites and the Diseases caused by their Growth upon Man," by Dr. Jas. C. White; and one or two papers on smallpox and the health of towns. The paper of Dr. Bowditch is interesting as being an excellent temperance document, in the real sense of the word, which does not imply total abstinence. Intemperance, he remarks, is rarer and less dangerous where the vine is grown and wines are made and sold cheap and used with entire freedom by all, from babyhood to old age.

The registration report of Dr. Caswell, of Rhode Island, presents the statistics of births, deaths, marriages, and divorces in that well-organized little State, in a very acceptable manner. It is a model of statistical accuracy and patient research, and is elaborated with a degree of care rarely visible in public reports and official documents. We should be glad, if we had the space, to give an analysis of its contents. It would be well if State officers elsewhere could always be so lucky as to secure the co-operation of men of Dr. Caswell's calibre; although this is perhaps hoping for too much in these degenerate days.

THE IRRITABLE BLADDER: ITS CAUSES AND TREATMENT. By FREDERICK JAMES GANT. Third Edition. Pp. 221. Lindsay & Blakiston, 1872.

The term "irritable bladder" is not restricted in this volume to the limited class of cases described by Sir Benjamin Brodie, but is adopted as a convenient title to express the prominent condition thought to be present in all troubles incident to the bladder either directly or indirectly. Hence the author treats of the diseases of the rectum and the genito-urinary organs at length, as well as of the urine—its chemical and physiological relations. Indeed, he might have better entitled his book *Diseases of the Bladder and Associate Organs*.

To say that it is a useful manual is to award its highest praise; and it is to be tested with this regard, as we would test an instrument. No doubt that interesting character, the "busy practitioner" of whom we hear so much from the reviewers, has proved it in this way to his satisfaction, since we learn that the work has reached its third edition.

We notice an absence of original cases. There is at best a beggarly array of cases of any kind. For our part, we could willingly have spared much of the commonplace generalizing upon constitutional causes of disease, and had its place supplied with original cases and comments. Such a plan would have been in accordance with the promise of the title-page, that a practical view would be given of urinary pathology, etc.

The author startles us with the announcement of a "remarkable law," to the effect that the temporary suspension of consciousness in one portion of the central nervous system is necessarily accompanied by its undue display in another direction, and its excitement in one position is as necessarily followed by its exhaustion in the remaining portion of the

system. Hence, in epilepsy, suspension of consciousness is coupled with convulsive movements of the limbs and trunk.

DR. RIGBY'S OBSTETRIC MEMORANDA. Fourth Edition, Revised and Enlarged. By ALFRED MEADOWS, M.D., Physician to the General Lying-in Hospital, etc. 18mo, pp. 104. Philadelphia, Lindsay & Blakiston, 1872.

This little book, originally written by the late Dr. Rigby, has, in the preparation of the present edition for the press, been carefully revised by Dr. Alfred Meadows, who is favorably known in this country as a writer on obstetrics. A few alterations in the arrangement of the subjects have been made, and some new matter has been added; but the editor's efforts have been directed—and in this we think he has succeeded—towards furthering the original intention of the author, by making the book as practically useful as possible. Its small size, while allowing it to be very readily carried in the pocket, will not be found to prevent it from containing a large amount of valuable information.

BOOKS AND PAMPHLETS RECEIVED.

A System of Surgery; Pathological, Diagnostic, Therapeutic, and Operative. By Samuel D. Gross, M.D., LL.D., D.C.L. Oxon., Professor of Surgery in the Jefferson Medical College of Philadelphia, etc., etc. Illustrated by upwards of Fourteen Hundred Engravings. Fifth Edition, Greatly Enlarged and Thoroughly Revised. In two volumes, 8vo. Vol. i., pp. 1098; vol. ii., pp. 1170. Philadelphia, Henry C. Lea, 1872.

On Food: its Varieties, Chemical Composition, Nutritive Value, Comparative Digestibility, Physiological Functions and Uses, Preparations, Culinary Treatment, Preservation, Adulteration, etc. Being the substance of four Canton Lectures, delivered before the Society for the Encouragement of Arts, Manufactures, and Commerce, in 1868. By H. Letheby, M.B., M.A., Ph.D., etc., Professor of Chemistry in the College of the London Hospital. Second Edition, Enlarged and Improved. 12mo, pp. xvi., 255. New York, William Wood & Co., 1872.

Minutes of the Twenty-third Annual Meeting of the American Medical Association. Philadelphia, William B. Atkinson, M.D., 1872.

The Seventeenth Annual Announcement of the Pennsylvania College of Dental Surgery.

Fourteenth Annual Report of the Board of Trustees of the Charity Hospital of Philadelphia.

GLEANINGS FROM OUR EXCHANGES.

THE MORAL TREATMENT OF HYSTERIA.—In Guy's Hospital Reports for 1872 (*The American Practitioner*, June, 1872) Dr. Samuel Wilkes makes the following judicious remarks on the management of hysteria:

"It sometimes surprises me that medical men declare their utter helplessness while standing by the bedside of an hysterical patient. They will confess that all means have been tried in vain, that there is no real disease to cure, that it is an imaginary or nervous disorder, and nothing can be done, when it is their own presence in the case which constitutes the very root and foundation of the malady. Let us take the case of a girl who goes to her bed with an ideal paralysis of the legs, or some similar disorder. She sinks into a morbid state, and puts on a second nature; she becomes the centre of a world of her own creating; she is the interesting invalid; she receives the sympathies of inquiring friends, the care of nurses, the consolation of the clergyman (for she is usually outwardly pious), and, above all, the daily visit of the medical practitioner, who prescribes appropriate physic. This is her perverted life; this is 'her little game.' Now and then the physician is called in, who gives his opinion that a great deal of the malady is due to hysteria, orders some iron and quinine,

and perhaps galvanism, and so the play goes on. The medical man declares that he has tried every means and failed. Does he not see that the whole affair is a drama of the patient's own creation, and she the central figure of the piece? She is to be ill, she is to have her doctor, and enjoy in her morbid way all the interesting surroundings of the invalid. Does he not see that to cure her he must break into the charmed circle, and to spoil the play he must get rid of some of the performers? And does he not see that, even if he has no influence over others, he might withdraw himself? Here is a young lady who says, 'I will be ill, and have a doctor to attend me.' How can she accomplish this if the latter declines to obey her behests? or if he accepts the post, how can he, in the name of common sense, say he cannot break her of her fancy while he is a party to it? If he sees clearly the truth of what I have been saying, his duty is, as professional adviser to the family of the patient, to retire, and use his influence to prevent the calling in of another medical man. I have myself seen in several instances where such advice has been given, and the parents have said to their child, 'We will have no more doctors,' that recovery has at once ensued. In one of the worst cases of hysteria I ever saw, where a young lady had been bedridden for three years, and during this time must have swallowed hogsheads of physic, and had her body covered with leeches and blisters without number, besides being well rubbed with tartar-emetic ointment, the medical attendant suddenly died, when the father declared that his daughter was ruining him, and that he would have no more doctors. From that time she began to recover, and may now be seen walking about quite well. Of course, if the medical man be wise and judicious, he may adopt various plans to break up the scheme of the young lady who has become the presiding genius not only in the household, but in the whole family-circle for miles around. My complaint is against the acts of a medical man who pays a daily visit to his patient, sends her physic to be taken every four hours, besides sleeping-draughts, prescribes a very particular regimen, consisting of all kinds of delicacies, commencing with rum and milk in the morning, and then says he cannot cure her of an imaginary complaint. Next to giving her physic when he knows there is nothing the matter with her, the worst thing is to diet her; for there is nothing so harmful in perpetuating a nervous malady as this. If he would one day say, 'No more physic; and as for diet, eat and drink what you would like,' he would be administering a moral stimulus more efficacious than all the iron and quinine she had ever swallowed.

"A young lady keeps her bed for two or three years for an affection of the hip, and is seen by all the leading men in London. One day the clergyman walks in, prays over her, and she gets up and walks. The case is reported in all the religious journals as a miracle, whereupon the doctors all join in declaring that the case was one of hysteria, and that there was nothing the matter with her. Then, I would ask, why was that girl subjected to local treatment and to the infliction of physic every day for years? Why did not the doctors do what the parson did? Of course the utmost acumen is required in order to make the diagnosis, for it is as cruel to call every female disorder hysterical as it is baneful to treat every malady as real. It is the doctor's daily labor to unravel the meaning of pain, whether it has a real seat or whether it be subjective. No rules for diagnosis can be laid down; every case must stand on its merits. I am merely offering a quota towards the value of moral treatment in genuine cases of hysteria, and of the harm done by all other means. I speak without hesitation in this matter, for some of the most remarkable recoveries that ever could have occurred have taken place in my ward in cases which had been hopelessly despaired of when the usual routine was being pursued."

CAUSES OF VARIATION IN THE AMOUNT OF GASES CONTAINED IN THE BLOOD.—Drs. Mathieu and Urbain, in a paper contained in the May number of Brown-Séguard's *Archives de Physiologie* (*The Academy*, June), state that they have been able to establish the accuracy of the law, "that in animals maintaining a constant temperature, the quantity of oxygen absorbed by the blood varies inversely with the temperature of the air that they respire." In other words, the

amount of oxygen that circulates in the arteries of a vertebrate animal with warm blood is greater when it is exposed to cold, and less when exposed to warmth; and, as a consequence, all the processes of organic combustion are rendered more active under the former condition, while they are retarded under the latter. They further show that under diminished pressure there is diminished absorption both of oxygen and of carbonic acid by the blood, and *vice versa*.

THE EFFECTS OF HYDRATE OF CHLORAL ON CHILDREN.—Dr. Alois Monti (*Schmidt's Jahrbücher*, No. 2, 1872; from the *Jahrbücher für Kinderheilkunde*) has noticed the following as the effects of hydrate of chloral when given to children: Half an hour after the dose is taken, slight reddening of the face occurs, and the child falls into a deep sleep. The pulse, which is at first accelerated, becomes slower, the respiration is not affected, and the temperature of the body falls. It is only when very large amounts are given that this condition is preceded by a period of excitement accompanied by contraction of the pupil. The sleep is perfectly normal, and when the child awakes there is no sleepiness, tendency to congestion of the brain, nor disturbance of the sensorium, left. Occasionally chloral causes vomiting, but never diarrhoea. Twenty-four hours after the exhibition of chloral, sugar may be detected in the urine by Fehling's test.

Chloral may be given to children—1, to produce sleep; 2, in convulsions (whether symptomatic or idiopathic), when there is no complication such as inflammation of the bronchi, heart, or lungs. It should be given with great care to anæmic, atrophic, or weakly children. 3, in spasm of the larynx; 4, in chorea; 5, in pertussis. Chloral has, on the other hand, not been found to be of any service, according to Dr. Monti, as an anæsthetic, or in the treatment of idiopathic or traumatic tetanus.

THE TREATMENT OF PNEUMONIA BY THE NEUTRAL ACETATE OF LEAD.—Dr. Strohl (*The Practitioner*, May; from *Le Journal de Médecine*, February, 1872), whilst admitting that pneumonia undergoes spontaneous cure in the greater number of cases, thinks that appropriate treatment should be adopted to aid the powers of nature. For many years he had recourse to the ordinary method of bleeding and the administration of tartar emetic, but since the year 1841 he has been in the habit of giving sugar of lead, which he considers to be the best of internal remedies for this disease. It is preferable, he remarks, to tartar emetic, to digitalis, and to veratria, because its action is more certain, more prompt, and more free from inconveniences. Its action is incontestably superior in the pneumonia of old people. About five grains may be taken per diem in solution, in divided doses. M. Strohl has never observed the slightest indication of saturnine poisoning in the course of this treatment, and M. Lendet, who has also used it largely, makes the same observation. Far from producing diarrhoea, it rather occasions constipation. It does not interfere with any of the phenomena concomitant to the critical resolution, as expectoration, diaphoresis, etc. Under its action the pulse rapidly diminishes in frequency, the febrile symptoms disappear and the temperature falls in the course of six days. The use of lead may be intermitted as soon as the fever has abated and resolution has fairly set in.

TREATMENT OF SUBCLAVIAN ANEURISM.—A long paper on this subject appears in the last volume of Guy's Hospital Reports (*The Practitioner*, June, 1872), by Mr. Poland, in continuation of a similar one in the preceding volume. In the present paper the principal points taken up are—1. Ligature of the first portion of the subclavian artery for the cure of subclavian aneurism. Eleven cases are on record of this operation having been performed. As Mr. Poland observes, it is fraught with danger, and is for the most part undertaken against the acknowledged rules laid down for the success of ligature of a large artery in aneurism, the vessel being tied close to the aneurismal sac, at a point where large and important vessels are given off from it, and where it is in proximity with nerves, veins, and the pleura. In some subjects one incision is sufficient, but generally two will be found requisite. All the cases recorded, with one exception, were of the right subclavian. The operation is pronounced by Ferguson the most difficult in surgery, and it is doubtful whether it

should be again attempted, every case having proved fatal, though with different symptoms. The longest duration of life was thirty-six days. 2. Simultaneous ligature of the first portion of the subclavian and common carotid arteries. This operation has also proved uniformly fatal. 3. Ligature of the innominate. This has been performed twelve times without one case of success, though in a case under Graefe the patient lived to the sixty-seventh day.

A ZOOTROPHIC POWDER.—V. Polli (*The Practitioner*, May; from the *Medizinisch-chirurgische Rundschau*, Feb. 1872), after dwelling on the importance of the presence of various mineral constituents of the body in food, if the healthy nutrition of the tissues is to be maintained, recommends the following powder as containing some of the most essential: Phosphate of lime, 10 parts; tribasic phosphate of lime, 10 parts; phosphate of soda, 15 parts; carbonate of lime, 10 parts; sulphate of magnesia, 15 parts; chloride of sodium, 10 parts; bicarbonate of potash, 15 parts; oxide of iron, 10 parts; oxide of manganese, 2.5 parts; silicate of potash, 2.5 parts. The dose of this powder is 45 grains daily for children, or double the quantity for an adult. He recommends its use especially—1, in infants at the breast who are suffering from dentition, or in nurses; 2, in children suffering from osteomalacia, rachitis, scrofulosis, or chlorosis; 3, in pregnant women, and those suffering from puerperal cachexia; 4, in fractures, and cases of caries of the bones; 5, in tuberculosis, especially when there are vomicae; 6, in anæmia after hemorrhages, and in leucocythæmia; 7, in convalescence after long illness.

THE ACTION OF QUINIA ON THE COLORLESS BLOOD-CORPUSCLES.—Dr. Geltowsky contributes to *The Practitioner* for June a very interesting paper on this subject, from which we make the following extract:

"We see, therefore, that although quinine possesses the power to stop the movements of the colorless globules, yet this action can only be obtained on the stage of the microscope. On injecting into the blood doses which cause the death of the animals, quinine has no influence on the colorless blood-corpuscles. Even if the quinine had had the same influence on the colorless corpuscles of the blood in the interior of the organism as under the microscope, it would have been impossible to explain, by the action of quinine on the colorless corpuscles, the cure of certain maladies under treatment by this drug, because, according to the preceding experiments, it is necessary to employ one part of quinine to twenty-eight hundred parts of the blood of man. Hence, in the case of a man in whom the quantity of blood would amount to about fifteen to twenty pounds, it would be necessary, in order to obtain the special effect, to take almost one drachm of quinine, which would be impossible."

THE SYNOVIAL MEMBRANES IN PYÆMIA.—In a paper recently read before the Royal Medical and Chirurgical Society (*The British Medical Journal*, June 1), Mr. Robert Hamilton, F.R.C.S., called attention to the fact that the synovial membrane is generally attacked in pyæmia. All the cases occurring at the Liverpool Southern Hospital for the last thirteen years, of which particulars had been kept, had some joint-affection. In some the pathological changes in the joint were slight, in others most extensive. That the disease observable in the joints begins in the synovial membrane, is rendered probable from the character of the pain and from the appearances found after death. The poison of pyæmia, as observed in hospital practice, is *sui generis*. Whether generated in the system from constitutional and surrounding conditions, or entering as a specific germ through a wound, it has a special affinity for certain structures, and to these it passes at once. These structures are assumed to be the synovial membranes. The strong analogy between pyæmia at the commencement and acute rheumatism has often been observed. In both there are the rigors, the fever, the rapid pulse, the profuse sweating,—but above all there are the pain and swelling of one or more joints. It seems probable that in both an entity enters the system whose habitat is the joint. It is not known in what consists the difference between the two poisons, so that the one, as a rule, eventuates in recovery, and the other in a train of pathological changes

whose termination is death. In both cases, the tissue first affected is the synovial membrane. The abnormal action induced in it leads to an increased secretion of synovia, probably unaltered in its characters and constituents in rheumatism, but abnormal in pyæmia. In the case of synovial fluid there is in most joints a limit to its quantity, which leads to a forced absorption of some of the effused fluid, and ensues in acute rheumatism, and probably, as a necessary sequence, an extension of the disease to other synovial sacs, and often to the pericardium, a serous membrane, but closely allied in its nature to a synovial membrane. This augmented synovial fluid in rheumatism is bland and innocuous,—a mere increase of the natural secretion; but in pyæmia it is in a decomposing state, developing rapidly germs of a lower organization; and when such a fluid has been absorbed, and in its course reaches the minute capillaries of the lungs, some of its morbid cells coagulate the fibrin of the blood there, and become arrested; and thus are formed the nuclei with which the nerves are studded, around which more fibrin is deposited, and then the pathological changes follow as described by Virchow.

TREATMENT OF HYDROTHORAX BY PARACENTESIS THORACIS.—In a thesis read for the M.D. degree of Cambridge, Dr. Evans (*The Practitioner*, June, 1872; from St. Thomas' Hospital Reports, 1871) strongly advocates the propriety of tapping the chest in cases where fluid has accumulated in it as a result of acute pleurisy. He gives a good historical account of the operation, and adds the details of some cases that have fallen under his own observation. The statistics of the mortality after the operation vary, according to whether certain extreme cases are included or not, from 24 to 29 per cent. As circumstances favoring the adoption of the operation, Dr. Evans mentions the following: 1. Pleuritic effusion may of itself cause fatal results, which would be prevented by the early removal of the effused fluid. Trousseau in 1841 knew of no less than from fifteen to twenty instances of sudden unexplained death in cases of large pleuritic effusion. 2. It has been alleged, and, Dr. Evans thinks, with reason, that the continued compression of a lung by pleuritic effusion is likely to predispose to disease, tubercular or otherwise, of the lung on the other side. An overworked lung must certainly be placed in an unfavorable condition for resisting any noxious influences to which it may be exposed; and should there be any hereditary or other constitutional tendency to disease, such as the so-called tubercular diathesis, he believes that it is more likely to be developed in a lung which has extra work to do in consequence of its fellow being incapacitated. Moreover, should a portion of the lungs be rendered useless owing to compression by fluid, in the case of disease attacking any other portion, there will be less spare lung, so to speak, to carry on the work of respiration, and the patient will be exposed to all the more danger. 3. The necessarily slow process of the absorption of the effusion gives time for various changes to take place within the chest, hindering or preventing the re-expansion of the whole or part of the lung; in all probability there would not be time for these changes if the fluid were let out early. Dr. Evans proceeds to point out the futility of the principal objections that have been advanced against paracentesis thoracis,—as, that there is danger of death from syncope during or immediately after the operation; that the operation may set up suppurative inflammation; that the admission of air may lead to such suppurative inflammation, and that hemorrhage may occur,—and then indicates the advantages it affords, namely, that it is the shortest and simplest method of getting rid of the fluid, at once relieving the patient from distress and dyspnoea, and that it places him at once in a more favorable condition for the absorption of the remaining fluid, or of any subsequent accumulation. In regard to the operation, he thinks the admission of air should be avoided, the puncture should be made in the fifth or sixth interspace in the axillary line, and when the fluid ceases to flow during inspiration, the canula should be removed and the wound closed.

CHANGES PRODUCED IN THE LIVER BY THE ARREST OF THE CIRCULATION IN THE PORTAL VEIN.—Dr. Solowieff (*Centralblatt*, June 1) has instituted some experiments upon animals to determine what is the effect upon the liver of an obstruction of the portal vein. As the ligature of the vein is generally

followed immediately by death, Dr. S. either tied one of its principal branches, or threw a ligature loosely around it so as to produce a narrowing of its channel, but not its complete obliteration. In cases in which the animals lived for some weeks, the thrombus, which was always found in the vein, was pale in color, and showed a tendency in its centre to break down into a fine granular yellowish mass. In some cases it could be removed with ease from the vessel, but in other cases it seemed to have formed connection with it. The liver was atrophied; upon section, the tissue was firm, and cried under the knife; it was anæmic, dry, and dark-brown in color; the hepatic cells were diminished in size, irregular in shape, red in color, and contained oil. The nucleus was detected only with great difficulty: in some cells it could not be found at all. Thrombi were also found in the branches of the portal vein, and in the neighborhood of these obstructed vessels the connective tissue had undergone a decided increase. It was found in various stages of development, partly old and partly recent. In the latter case, spindle-form cells with their processes, stretching in all directions, could be seen.

PARALYSIS OF THE BLADDER CURED BY ELECTRICITY.—In this case (*Bulletin Général de Thérapeutique*, June 15, 1872) a young man took with suicidal intent fifteen grammes of laudanum. Treatment was promptly instituted, and a fatal result was thus averted; but the patient, whose bladder was full at the time of taking the laudanum, was unable to pass his water for several days afterwards. After the more usual remedies had been tried without success, Dr. Pierreson determined to use electricity. One pole of the battery was placed upon the hypogastrium, and the other was applied to the free extremity of a metallic catheter, which had been previously introduced into the bladder. At the end of six days the patient is said to have had no trouble whatever in micturating. In cases where from some cause the introduction of a catheter into the bladder is prevented, the galvanization of the organ can be effected by applying one pole to a sound introduced into the rectum.

MISCELLANY.

METEOROLOGICAL.—The mean temperature of the month of June, 1872, was 76.26°, or a degree less than the highest mean temperature recorded for June in Philadelphia since June, 1790. The highest temperature observed during the month was 94°, on the 14th and 29th; the lowest 58°, on the 5th. Although the mean temperature of the month was higher in 1870, there have been more hot days this year, the thermometer having run above 88° on eleven different days during the month just past.

The total rain-fall for the month was 4.22 inches, 1.6 inches having fallen on the 25th. The average rain-fall for June during the past thirty-five years has been 4.10 inches.

THE fatal effects of long-continued and excessive heat are very fully shown in the tables of mortality, which we present as usual in another column. It will be seen that the total number of deaths reported to the Board of Health of this city for the week ending July 6 was seven hundred and forty-six. Children suffered, of course, more than adults. Thus, five hundred and twelve of the deaths occurred in children under five years of age, four hundred and seventy-six in children under two, and three hundred and eighty-eight in infants who had not yet attained their first year. The disease furnishing the largest number of deaths is cholera infantum, as many as two hundred and seventy-four children dying of it. Eighteen adults and four children are said to have died from the direct effects of the heat, or from sunstroke; but that this gives but a faint idea of the mortality among adults which may be traced to the influence of the heat, will be seen by comparing

the table for the week ending July 6 with that of the week preceding.

New York appears to have suffered even more severely than Philadelphia, for the number of deaths there is more than one hundred per cent. greater than that in this city, with only about forty per cent. greater population.

We give below the maximum and minimum temperatures from June 27 to July 5 inclusive, as recorded at the Pennsylvania Hospital:

		Maximum.	Minimum.
June 27	. . . .	91	74.5
" 28	. . . .	92	76
" 29	. . . .	94	78.5
" 30	. . . .	93	79
July 1	. . . .	98	82
" 2	. . . .	98	84
" 3	. . . .	98	82
" 4	. . . .	97.5	83
" 5	. . . .	91.5	75

BEQUESTS TO HOSPITALS ABROAD.—*The Medical Press and Circular* discourses, in a late issue, upon hospital endowments in a way to astonish those of our readers who have any personal knowledge of our similar institutions. Perhaps after all, however, it is only old age and youth. The remarks alluded to are as follows:

"Hospital managers in London have certainly their lines cast in pleasant places. It would almost appear, from a perusal of the grants, donations, subscriptions, and bequests recorded from day to day in the *Times*, that their greatest difficulty must be to withdraw the money out at one end of their purse with as much rapidity as rich and benevolent people keep pouring it in at the other.

"A well-known charitable institution, which is a favorite with the public, had its annual meeting last week with great éclat, only that one circumstance deprived the occasion of its natural stimulus: it was totally impossible to follow the example of *Oliver Twist*, and ask, for more, because the funds of the institution are simply glutted. It accommodated 698 patients under treatment, and 403 convalescents, and sustained a total of 127 beds. It expended £7835, or about £62 per bed per annum. Nevertheless, it carried forward £3000 of a surplus unexpended, and had a reserve of £23,000."

ASTLEY COOPER PRIZE.—The next triennial Astley Cooper prize of £300 will be awarded to the author of the best essay or treatise on "Injuries and Diseases of the Spinal Cord," which must be sent to Guy's Hospital before January 1, 1874.

WE learn from *The Indian Medical Gazette* for April that cholera continues to exist in the district of Jounpore, where the disease has existed, to a greater or less extent, during the past twelve months. The disease has also broken out in the district of Bustee, into which it is supposed to have been imported from the Nepal territory.

A NEW HOSPITAL FOR THE INSANE.—At a meeting of the Medical Society of the State of Pennsylvania, the following was adopted: "*Resolved*, That a committee of five members of this society be appointed to prepare a memorial to the Legislature in favor of the erection of a hospital for the insane for the counties of Erie, Crawford, Mercer, Venango, Warren, McKean, Elk, Forest, Cameron, and Clarion, and to press upon them the urgent necessity of such an institution."

A PATENT BED-TABLE.—The *Lancet* for June 1, 1872, contains two wood-cuts representing Mr. Isaacs' patent bed-

table, which seems to be an exceedingly ingenious contrivance. It is made to fix by screws to the frame of an ordinary bedstead, either of wood or iron; and when not required, it folds up and turns away under the bedstead. It has been for some time in use in St. George's Hospital, where it has given great satisfaction.

METEOROLOGICAL REGISTER TABLE.—For the benefit of those who have never lived in Alaska, and who have been led to believe that the Territory is one "unconditional ice-field," we publish below the mean observation of the Meteorological Register Table as computed by W. H. Ensigne, Surgeon U.S.A. of that department, at the respective hours of 7 A.M., 2 P.M., and 9 P.M. of each day:

Date.	Thermometer.	Hygrometer.	Rain-fall.
July 10	55 59 53	54 57 55	.10
11	55 57 54	53 54 52	
12	55 60 54	54 58 53	.10
13	55 62 55	54 60 54	
14	54 54 53	53 53 52	.60
15	53 53 53	52 52 52	.12
16	57 53 53	55 57 52	.25
17	56 59 51	55 57 49	
18	59 62 54	55 58 53	
19	58 63 55	56 62 54	
20	55 61 55	54 58 53	
21	55 61 55	53 59 54	
22	56 65 57	55 63 55	

Total, 1.17

THE PROSPECTS OF FEMALE PHYSICIANS.—The admission of women into the ranks of the medical profession in Germany appears to have commenced. A young woman recently presented herself before the Faculty of Medicine at Munich for examination for a license to practise as dentist. Being refused, she went to Erlangen. The question was here referred to the government, who at once authorized the examination, on the ground that it was absurd to exclude a person desirous to submit herself to authorized professional tests of ability by reason of her sex. The young woman triumphed, and, the German journals add, is likely to find immediate imitators.

Mr. Walter Thomson, of Shahabad, has forwarded to the "Committee for Securing a Complete Medical Education to Women" the sum of £100 in aid of the funds of the committee, and in protest against the conduct of "some of the professors and students of the Edinburgh University." From another Indian source the cause of female medical education has just been subsidized, the Mohammedan Nawab of Rampoor having presented to the Bareilly mission a large building for the female students.

THE DEPOPULATION OF FRANCE.—M. E. Decaisne recently made a short communication to the Académie des Sciences (*L'Union Médicale*, June 15, 1872), of which the following is an abstract:

It appears from the figures given by the author for the principal States of Europe that in the triple point of view of the fecundity of marriages, of the number of births, and of the excess of births over deaths, France occupies the last place in Europe. In Prussia, for every 100 marriages, there are 460 children; in France, only 300. In Prussia, the number of births annually in proportion to the population is 3.68 per cent.; in France, only 2.55. Lastly, the excess of births over

deaths in every million of inhabitants is in Prussia 13,300, while in France it is only 2400. From these figures we learn that the population of France will not double itself in less than 170 years, while that of Prussia will double itself in 42, that of Great Britain in 52, and that of Russia in 66 years.

MORTALITY FROM SMALLPOX.—The number of deaths from smallpox in Philadelphia during the weeks ending June 29 and July 6, 1872, were respectively 19 and 10, 16 of which were of minors.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending	
	June 29.	July 6.
Consumption	44	45
Other Diseases of Respiratory Organs	29	27
Diseases of Organs of Circulation	13	21
Diseases of Brain and Nervous System	64	106
Diseases of the Digestive Organs	123	349
Diseases of the Genito-Urinary Organs	5	7
Zymotic Diseases	48	44
Cancer	6	8
Casualties	11	12
Debility	44	67
Intemperance	2	3
Malformation	1	0
Murder	0	1
Old Age	14	20
Scrofula	0	2
Stillborn	18	8
Suicide	2	1
Sunstroke	0	22
Tetanus	0	2
Tumors	0	2
Unclassifiable	11	14
Unknown	1	3
Totals	436	764
Adults	158	221
Minors	178	543

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JUNE 29, 1872, TO JULY 3, 1872, INCLUSIVE.

RANDOLPH, JOHN F., SURGEON.—By S. O. 148, War Department, A. G. O., June 27, 1872, relieved from duty in Department of the Gulf, to proceed to Washington, D.C., and settle his accounts as Acting Medical Purveyor.

CLEMENTS, B. A., SURGEON.—By S. O. 143, War Department, A. G. O., June 21, 1872, relieved from duty in Department of the Gulf, and assigned to duty at St. Louis Depot, Mo.

SPENCER, WM. C., SURGEON.—By S. O. 59, Military Division of the Missouri, Chicago, Ill., July 1, 1872, assigned to duty as Attending-Surgeon and Examiner of Recruits in this city, to date from 25th ult.

BACHE, DALLAS, SURGEON.—By S. O. 123, Department of the East, July 1, 1872, granted thirty days' leave of absence, and at its expiration to report to the Commanding Officer, Fort McHenry, Md., for duty as Post-Surgeon.

STORROW, SAMUEL B., ASSISTANT-SURGEON.—By S. O. 55, Department of the Lakes, June 19, 1872, assigned to duty at Fort Ontario, N.Y.

FELTON, H. R., ASSISTANT-SURGEON.—By S. O. 124, Department of the East, July 2, 1872, to accompany Eighth Infantry to Sioux City, Iowa, return to New York City upon completion of said duty, and report in person at these headquarters for further orders.

JAQUETT, GEO. P., ASSISTANT-SURGEON.—By par. 1, S. O. 109, Department of the Platte, June 28, 1872, assigned to duty as Post Surgeon at Fort Sanders, Wyoming Territory; and by par. 4, same order, granted leave of absence for thirty days.

BROWN, H. E., ASSISTANT-SURGEON.—By S. O. 139, War Department, A. G. O., June 17, 1872, detailed to make the inspections and reports required under Joint Resolution of Congress "Providing for a more effective system of quarantine on the Southern and Gulf Coasts;" to return to Washington, D.C., on November 1, 1872, and, through the Surgeon-General, make his report to the Secretary of War. Station: New Orleans, La.

BUCHANAN, W. F., ASSISTANT-SURGEON.—By S. O. 111, Department of Texas, June 24, 1872, assigned to duty at Fort Concho, Texas.

MONROE, F. LEB., ASSISTANT-SURGEON.—By S. O. 146, c. s., War Department, A. G. O., granted leave of absence for ninety days.

THURSDAY, AUGUST 1, 1872.

ORIGINAL LECTURES.

CLINICAL LECTURE.

RHINOSCOPY AND DISEASES OF THE PHARYNX.

BY HARRISON ALLEN, M.D.,

One of the Surgeons to the Philadelphia Hospital.

GENTLEMEN,—I propose to occupy your time to-day with some remarks upon the pharynx, and the method of examining this cavity, as well as of treating its diseases.

Pharyngeal therapeutics have undergone complete revision since the introduction of the mirror as an aid to diagnosis. You have heard a great deal about the laryngoscope, and what is due to it as an aid to laryngeal medicine; but of the rhinoscope comparatively little has been said, and that little, if I may judge from my knowledge of the books at your command, is presented in such a sketchy and unsatisfactory manner as to mislead, if it have any influence at all. Rhinoscopy is therein represented as an easy manipulation; but I can assure you that it may often prove in your hands one of great difficulty. In your readings of diseases of the pharynx you have no reason to believe that they present peculiarities; whereas, in truth, they fairly bristle with points of unusual bearing, and respond capriciously to treatment.

It is a great satisfaction to know that, in spite of these facts, we have no reason to be discouraged. The difficulties of rhinoscopy, in the majority of cases, can be overcome; while the morbid peculiarities of the region are in entire subordination to well-known principles.

Permit me to allude for a moment to the latter; for I think they have not been sufficiently recognized.

The pharynx is a chamber devoted to the performance of two distinct functions. While a part of the alimentary canal, it yet receives the respiratory tract; gastric as well as pneumonic crases may create symptoms referable to it. The nasal and oral chambers both communicate with the pharynx: the former is the ordinary passage for the air in respiration, the latter for food. Now, a special muscular apparatus—half valve-like, half sphincter-like, in its action—is so arranged that the base of the valve secures a fixed point from the posterior edge of the hard palate, and is held taut, as sailors say, from below and behind by two obliquely-placed muscular bands (the palato-pharyngeal muscles), which are inserted in great part in the posterior wall of the pharynx. At the same time, two additional bands (the levator palati muscles) are known to pass upwards and backwards divergently from the upper surface of the valve, to secure a fixed point from the temporal bone. This apparatus is capable of cutting off the naso-pharynx from the oro-pharynx, first by the elevation of the valve (by the latter muscles), and secondly by the advance and constriction of the pharynx (by the former). Every such act leaves no portion of the pharynx, excepting its roof, unexcited. It is repeated in every act of swallowing, gagging, coughing, hawking, etc. In ordinary breathing the soft palate moves gently to and fro. Deglutition is by no means confined to eating. A person in health will, every few moments, unconsciously to himself, swallow the saliva which is unceasingly passing into the mouth. We see at once from the physiological relations of the parts, therefore, how difficult it is—if it be not impossible—to give the parts *rest*. We all know the great importance placed upon rest as an

element of surgical treatment. Suppose a morsel of food lodges in the pharynx. Immediately a spasm occurs, and the offending body is ejected. But suppose again that this foreign body is not a portion of food, but a globule of tenacious mucus, sliding down the soft palate from the nose, as is often the case in ozæna, or—what is quite as frequently seen—a plug of mucus hanging from the fossa behind the orifice of the Eustachian tube, and constantly exciting the pharynx to fruitless efforts to dislodge it; we recognize in these agents not only the indications for their removal, but satisfactory reasons why, if any such local cause persists, no matter how insignificant it be, it may serve as an element of unrest to the entire region.

But we have yet another cause for persistent unrest of the pharynx in disease, viz., that through agency of the nerves. It is a received principle in pathology that an irritant, applied to any filament within the distribution of a given nerve, may excite inflammation at any or all parts of the region supplied by such nerve. Thus, a diseased tooth of the left side may excite an ophthalmia of the same side, since both organs are supplied by the same nerve of general sensibility. So in the pharynx we may have a constant teasing of the parts kept up, and a pharyngitis established, from a diseased state of the nasal mucous membrane; the nerves in question being the palatine branches of the ganglion of Meckel, which are distributed to the nose, palate, and lateral wall of the pharynx. We cannot meet such cases by the method elsewhere adopted for troubles excited by over-action of a sphincter, and “silence” them with the knife. We must temporize with them as best we may; and, in the first place, a thorough examination of the entire pharynx, from the epiglottis to the roof of the organ, is necessary.

You have, I will say, a case of pharyngeal trouble, the prominent symptoms of which are dryness of the throat, and a tendency to clear it frequently, conjoined with a sense of constriction after moderate exertion in speaking. By the best possible light, one can see nothing of the pharynx but that portion of the posterior wall between the palato-pharyngeal folds. This view may tell a great deal, or it may tell nothing. The follicles may be engorged, the orifices thereof appearing as lentil-shaped swellings; or the surface of the mucous membrane may be dry, glistening, or moist. Do not be satisfied with such an examination, but at once use the rhinoscope. We have said that rhinoscopy is a difficult manipulation. It is so because the mirror becomes that foreign body above mentioned which it is the instinct of the pharynx to eject. You may say that this is equally true of the laryngoscope. Not so; for in laryngoscopy the instrument is inserted during a pharyngeal spasm. This is an accident in rhinoscopy.

To these at-all-times-present obstacles is joined the coincidence that it is the diseased and therefore irritable pharynx which it is desired to examine,—one which exaggerates the above difficulty, and one which oftentimes presents a contraction of the space between the palato-pharyngeal folds, and permanent approximation of the soft palate towards the posterior wall of the pharynx. This condition may, indeed, make the examination impracticable. Very many times I have been frustrated in my attempts to examine a naso-pharyngeal space, when from the rational signs I had reason to expect some interesting local change. In a certain percentage of chronic cases, where from long-standing disease the parts have become rigid and the calibre of the part contracted, and in another class, namely, acute syphilitic pharyngitis accompanied, as is the rule, with submucous œdema, thus diminishing the working space, rhinoscopy is impracticable. Excluding these, we may affirm that a satisfactory examination is possible

if forbearance on the part of the operator, and a desire to be relieved on the part of the patient, be conceded.

A wide and capacious pharynx will permit a complete examination at the first sitting; but such convenient pharynges are, unfortunately, rarely met with. The average pharynx is not so accommodating: it demands a systematic course of training; an apparatus only partially under the control of the will is to be entirely so controlled; an irritable surface is to be made tractable. The first we can accomplish only through the assistance of the patient; the second can be overcome by medication. Should the patient naturally have a strong will, a small pharynx may prove the better one, compared with a larger organ in the person of a hysterical or indifferent patient. I have in this last regard been much disappointed in my attempts to examine the pharynges of the inmates of the house. As you know, the vast majority of these are human trash of one kind or other, who have drifted into a poor-house hospital from mere lack of those very qualities that make a strong effort of the will to control a half-involuntary muscular act difficult, if not impossible. The result is, in attempting an examination of a person of this class, the continual gagging, retching, and tumultuous pharyngeal orgasm are apt to react so disastrously upon that other element of success in the manipulation, namely, the patience of the operator, that he will give up the effort in despair.

I have noticed, also, that it is very difficult to examine the pharynx of a negro. This appears to be due to the fact that the tongue in persons of this race is of proportionately large size, with increased sensibility towards its base. It is correspondingly difficult to control. The pharynx of edentulous persons is also examined with difficulty; contraction of the pharynx following the most careful use of the tongue-depressor.

The manner in which I have conducted my examinations has been as follows. The position of the patient is similar to that for laryngoscopy: the head is thrown back, and the strongest reflected light which can be secured from a concave mirror is directed upon that part of the naso-pharyngeal aperture into which it is proposed to reflect the image. We will say we desire to examine the right side of the upper part of the pharynx. The light is focussed upon the *left* half of the aperture, and illuminates the corresponding half of the posterior wall of the pharynx. The tongue-depressor is now introduced by the left hand, and the tongue gently but firmly depressed, while the mirror, which has been warmed, is passed into the mouth and guided by the depressor back into the pharynx between the uvula and the left palato-pharyngeal fold. The elbow of the shaft of the mirror should not at any time be permitted to leave the tongue-depressor. Nor should the slightest touch with any part of the pharynx or soft palate be permitted. The uvula should be dodged, and all attempts to draw it forward by hooks and snoods avoided. As a rule, active resistance to interference is the only response, no matter how often the experiment may be repeated. Any parts permitting the uvula to be touched by an instrument without causing elevation of the palate and consequent occlusion of the naso-pharyngeal aperture can be so educated as to render such accessories unnecessary. It is in the act of introducing the mirror to the position indicated that the chief difficulty exists. Having secured this vantage, the rest is easy. Now carry the mirror obliquely as far as possible over to the left, and then gently depress and elevate the handle. By this means a vertical view of the *right* side of the lateral wall of the space above the palate can be secured. This includes the palato-salpingal fold covering the levator palati muscle, the Eustachian fossa, and the fossa of Rosenmüller. Next rock the mirror by a to-and-fro action of the handle. A transverse view of the space can be secured at the left

of the posterior naris, with its contained images, the septum narium, and possibly a portion or all of the right naris; the junction of the vomerine septum to the roof of the pharynx, and the posterior edge of the soft palate, with the uvula, may be seen. For the examination of the left side the process must be reversed. The tongue-depressor must be held in the right hand,—the mirror in the left,—and carried well over to the *right* side of the aperture. If, after repeated trials,—let me say six or eight,—the throat proves captious, it is better, in my judgment, to dismiss the patient for the day, ordering a gargle of chlorate of potassa or bromide of potassium to be used freely until the next sitting, at which time you may be surprised to find that the former difficulties have vanished, and that you are able to make a satisfactory examination. I have occasionally, however, been compelled to ask of my patient two or three sittings before I could give an opinion as to the condition of the parts.

Let us suppose the examination is successful. What are the conditions to be observed, and what are their relations to pharyngeal disease? I would have you remember the order in which I named the noteworthy objects therein contained. The palato-salpingal fold may be thickened, and tend to narrow the lower margin of the orifice of the Eustachian tube. The Eustachian fossa may be patulous, plugged with mucus, or closed. If the latter, the palato-salpingal fold may be suspected as an auxiliary; or, as is more commonly the case, the hook-cartilage of the tube is reddened and thickened, while the fossa of Rosenmüller is occupied with a plug of tenacious mucus. The superior and middle turbinated bones are of a pale slate-gray color. Unless the patient be unusually well trained, only the upper portion of the inferior turbinated becomes visible. The septum narium is of a brighter color than the turbinates. A swelling of the mucous membrane covering its sides becomes oftentimes a very noticeable feature, and is alone capable of preventing proper passage of air through the nasal chamber of the side within which it is found. The roof of the pharynx may be thrown into transverse folds, which, if well marked, give a flesh-colored cushiony appearance to this part, very unlike the rest of the general surface. This ends abruptly at the base of the septum narium. The contrast in appearance between the septum narium and the roof of the pharynx is very striking. This part may be found thickened, and bleeding readily,—a condition which has been described as adenoid disease by Meyer of Copenhagen. In one of the worst cases of spermatorrhoea that has come under my notice, the upper third at least of the space was occupied by tassel-like growths, which bled readily.

I have notes of a remarkable case of occlusion of both posterior nares from what appeared to be a growth of membrane descending from the roof of the pharynx. An unmarried female, aged 23, a cook, noticed difficulty in clearing her nose, five years before coming under my notice. She had difficulty of hearing in the left ear eighteen months before. Both posterior nares were closed, excepting a small opening the diameter of a small darning-needle on the palatal curve of the right posterior naris. A Eustachian catheter passed into the nose could not be made to rupture this curious membrane. The case also exhibited chronic inflammation of the pharynx and larynx.

Ulcerations of any kind I have never seen. My experience appears to be exceptional in this regard. Mackenzie, Semeleder, and others mention them. I have had reason in chronic syphilitic angina to suspect the existence of ulceration in the naso-pharyngeal space, but, for the reasons already given, have failed to complete an examination.

In the great majority of cases, pharyngeal disease,

when originating above the palate, is located in the group of closed glands analogous to the tonsillar gland, which is lodged behind the Eustachian tube in the fossa of Rosenmüller.

When we remember how frequently the tonsil becomes enlarged from repeated attacks of inflammation, we are prepared to learn that this glandular mass frequently becomes the seat of disease. From its peculiarly isolated condition,—being removed from the grasp of the constricting act of the pharynx,—it, while serving to excite increased activity of the glands within and around, is unable under diseased conditions to remove its own thickened secretion. The individual is constantly fretted with a desire to rid himself of some irritating substance above his palate. To use his own expression, he is continually hawking, and the pharynx is "dry, dry, dry!"

In a number of these cases I have traced a history of diphtheria. One gentleman, who had had this affection eight years, attributed it to an attack of that disease. It would be worth while to remember the possible association of these troubles.

That the posterior edge of the soft palate is oftentimes the seat of syphilitic ulcerations is well known; and their prevalence should never be forgotten in cases of angina. The continued excitation of the posterior wall of the pharynx by such an ulcer may, and often does, spread the disease, and tend to contract the communication with the nose.

In a lingering acute naso-pharyngeal catarrh the membrane is of a dark flesh tint, bathed with a copious secretion. The Rosenmüllerian fossa is not apt to be filled with mucus. The capital of the internarial column is marked by a deltoid patch of submembranous œdema, the apex of the figure being adjacent to the thickened membrane at the roof of the pharynx.

It is a noteworthy fact that profound morbid changes may take place in the general lining of the pharynx without involving the interior of the Eustachian fossa. The delicate lightish-yellow hue of the anterior surface of the hook-cartilage met with in the orifice of the fossa is very generally present. Occasionally it may be traversed by a minute vein.

The points to be observed in examining the fossa are, first, to what extent, if any, the cartilage is pushed forward, thickened, or otherwise changed. Engorgement of the pharyngeal tonsil may accomplish the first of these, or a chondritis may in itself tend to occlude the opening. Second, the relative size of the whitish spot. It may be large, with the lower margin of the orifice contracted downward,—when no thickening of the side of the pharynx is present,—or it may be small, and depressed within a cushiony vestibule formed by the surrounding infiltration.

Yet another feature of the upper region of the pharynx deserves more than a word in passing: namely, the varieties of mucous membrane found there. No division of the alimentary tract can boast of so many. We have mucous membrane in contact with a periosteum (muco-periosteum), as on the nasal septum; we have the membrane conjoined with a perichondrium (muco-perichondrium), as in that covering the hook-cartilage; we have the membrane covering the aponeurotic tissue at the roof and the side of the pharynx. These relations have a tendency to make acute inflammations of such membranes pass into chronic forms. Thus a coryza may become a chronic catarrh; and we have the lesion of that disease so modified by its locality as to be liable to excite an otitis of the septum and the turbinates, or perichondritis of the tube.

Treatment.—I will not detain you long with remarks upon this branch of the subject. After the cause of the condition has been ascertained, the plan of the treatment is at once apparent, and presents compara-

tively few points of interest not already in your possession. The remedies for inflammation of the pharynx do not differ from those employed in other inflammations; and here, as elsewhere, the metallic salts hold their supremacy,—and chief among them the nitrate of silver. I believe that the judicious use of a solution of this article, in strength ranging from twenty to eighty grains to the ounce, will accomplish more than any other agent in chronic pharyngitis with dryness of the parts about the naso-pharyngeal apertures, and in which, more particularly, the rhinoscope has announced the presence of a muco-chondritis of the Eustachian tubes, or the so-called adenoid condition of the roof of the pharynx. In those frequent instances of pharyngeal-tonsillar hypertrophy, with tendency to hawking of mucus, a Eustachian catheter used as a probe may be made to pass from the nose to the affected spot, and the offending secretion scraped away. In some cases I have made an application of the medicated stick, as it is called: namely, a fusion of nitrate of potassa and nitrate of silver. This I accomplished in the following manner. We will say equal parts of the two salts are melted in a test-tube; the twisted tip of a slender wire of aluminium is now dipped into the fused material. Upon withdrawing it, a small quantity of the mass will be seen adhering to it. A Eustachian catheter of broad calibre (I have had an instrument of britannia metal made by Gemrig, of this city, for this purpose: it is shaped like a Eustachian catheter, but is of wider calibre) is now inserted into the nose. The patient being intrusted with the tongue-depressor, the rhinoscope will announce the exact position of the instrument. When it is known that the end of the curve is fairly engaged in the fossa of Rosenmüller, the rhinoscope may be withdrawn and the charged wire passed through the catheter with the disengaged hand, and brought in contact with the affected surface. Or a few drops of a strong solution of silver may be carried along the catheter by a syringe armed with a long nozzle (an ordinary hypodermic syringe, with a nozzle sufficiently long to reach the curve of the catheter, will accomplish the purpose very well), after which the Politzer may be employed in blowing the contained fluid freely into the fossa. In the case of adenoid disease associated with spermatorrhœa, previously alluded to in this lecture, marked benefit followed the application of the medicated stick to the roof of the pharynx when injections from beneath had failed. In my hands this method of reaching the affected parts has proved more satisfactory than the pharyngeal syringe. The instrument is objectionable from the fact that it operates from below. Annoying spasm, too, often interferes with its application. With children, however, and intractable adults, it is a valuable adjunct. Dr. O. D. Pomeroy, of New York, has used extensively, and with satisfactory results, an instrument resembling a Eustachian catheter, but bulkier, to which is attached a Politzer bag and tubing. A few drops of the selected fluid are sucked up by the bag through the terminal orifice of the instrument, and thrown up above the soft palate.

In pharyngitis dependent upon general naso-pharyngitis, no instrument can approach in efficacy the atomizer. The best form of this instrument I am familiar with is that known as the Sasse sprayer. The peculiarity of this instrument consists in a test-tube receiver which is held in the left hand, and a pair of very long barrels, the points of which, when the receiver is near the mouth, are lodged within the axis of the pharynx; the whole being worked by a bulb and tubing held in the right hand.

In specific ulceration of the naso-pharyngeal space, I have obtained good results from the use of a solution of sulphurous acid of one drachm to the ounce, sprayed upward through the naso-pharyngeal aperture; or the

pure acid may be applied to the affected spot if the part thus operated upon lie below the palate.

Where there is abundant mucus, as in lingering acute catarrh, a spray of strong alum-water proves oftentimes efficacious. It is in this class of cases that insufflations of alum are of advantage. The best insufflator with which I am acquainted is a simple glass tube, bent at convenient angles and furnished with a fenestra at about its middle; a light piece of india-rubber tubing attached to one end of the glass tube completes the instrument. The powder to be used—we will say alum—is inserted in the glass tube through the fenestra, which is then covered by a sliding cylinder of rubber. The instrument now being inserted in the pharynx, with the orifice of the tube pointing upward, the opposite end of the instrument is held between the lips of the operator, who quickly blows the powder up into the naso-pharyngeal space. I am indebted to Dr. Bertolet, of Philadelphia, for the instrument I show you.

I must not neglect mentioning the nasal douche as an adjunct to our treatment; more, however, as an aid in *washing* the parts than to medicate the region. Weak solutions of salt, or carbonate of soda, used *tepid*, will meet every indication. The washing need not be repeated oftener than once a day,—say at the time of the morning toilet.

Such is a brief outline of the treatment of the different forms of pharyngitis. I do not wish to paint the subject in too bright colors, by saying that you can overcome all difficulties by the rhinoscope and improved means of medication. But I am sure you will find these methods more satisfactory than the old-time administration of gargles and snuffs; and it is certainly desirable to place pharyngeal medicine on a scientific basis, which with the aid of the rhinoscope is alone practicable.

ORIGINAL COMMUNICATIONS.

CASE OF PUERPERAL ECLAMPSIA TREATED WITH THE NITRITE OF AMYL.

BY WILLIAM F. JENKS, M.D.,

One of the Obstetric Physicians to the Philadelphia Dispensary.

MRS. X., æt. 36, primipara. At the beginning of the fourth month of gestation, the patient, while sewing, was surprised by an attack of uterine hemorrhage, which lasted with intermissions for a week. The flow was not very profuse, however, and no measures other than rest and the application of cold cloths were taken to arrest it. During the last four months of pregnancy she noticed a gradual dropsical enlargement of her hands and feet, and complained of frequent headaches and flashes of light before her eyes, while her husband noticed a certain dullness of intellect and a hesitancy of expression which were not natural to her. In the absence of Dr. Hooper, I was called to see the patient after midnight (June 13), and found her alarmed at the free escape of water from her. As there was no uterine contraction whatsoever, and as she stated that she had not passed her water for some time, I drew off with the catheter a bowlful of urine, clear in color, almost free from albumen, and presenting nothing abnormal on microscopic examination. The vaginal portion of the cervix was not yet effaced, but the os uteri was soft and dilatable. The escape of water continued, the uterine tumor diminished in size, and labor-pains were soon developed. At ten o'clock in the morning the head had descended well into the pelvis, and the expulsive pains were violent; the woman was exceedingly sluggish in thought and intellect, and her hearing was very much impaired; the pulse was 120, full and tense, and the face suffused. I endeavored to arouse her, and then first noticed the set look, the contracted pupil, the faint twitching of the facial muscles, which were soon fol-

lowed by a puerperal convulsion lasting three or four minutes, with subsequent loss of consciousness. Several attacks ensued, nor was their development at all influenced by the administration of ether. The delivery of a living child was followed by a return of consciousness, and the placenta was delivered by Credé's manipulation, the uterus contracting powerfully. The convulsions again returned in about half an hour, with increased violence, followed by complete loss of consciousness. After one or two severe convulsions, I administered two or three drops of nitrite of amyl by inhalation when the premonitory twitchings, the contracted pupil, and the convergent strabismus announced the return of a seizure. The effect was magical: the muscles relaxed, the strabismus disappeared, the face flushed, and the patient remained quiet for a longer or shorter time. In this way five or six successive attacks were arrested before development, the amount of the nitrite of amyl necessary being usually only one drop. At this time the uterus became relaxed and boggy to the touch, and contracted only feebly after external manipulation and ice. The hemorrhage was quite free, and again and again large masses of clots were pressed out of the uterus. Under these circumstances I injected a weak solution of ferri persulphas (f₃i of the liq. ferri persulph., U.S.P., to a basinful of water), which produced temporary contraction, but not to a satisfactory degree: so I increased the strength of the solution, and the organ remained firm, but larger than normal. Complete consciousness had returned, and the subsequent history of the case presents no especial points of interest. The treatment consisted in the free administration of drastic cathartics and diuretics, beef-tea, and quinia. Slight local tenderness over the abdomen, with increased frequency of pulse, yielded readily to hot fomentations and opium.

I have recorded this case because it presents points of interest both in regard to the pathology of puerperal eclampsia and its treatment. It cannot be classed among these,—the number of which I believe to be small,—when the convulsive seizure is due to the presence of urea or any of its derivatives in the blood, for the urine contained only the slightest amount of albumen. The secretion had been quite free up to the time of the attack, and the microscopic examination did not reveal the presence of any morbid products which could justify the supposition of Bright's disease. We do find, however, evidences of hydræmia and an impoverished state of the blood. The naturally full habit of the woman, the occurrence of unprovoked hemorrhage at the fourth month, the dropsical swelling of the face, arms, and legs, the slight amount of albumen in the urine, the hydrops amnii leading to premature rupture of the membranes, the phenomena having their origin in disordered cerebral action, the full, tense, and labored pulse, all point to increased vascular tension and to a deterioration in the quality of the circulating fluid. The theory of Traube and Rosenstein has already been brought before the readers of this journal,* and I need only briefly recall the sequence of phenomena which result in puerperal eclampsia. First of all, there exists during gestation hydræmia, producing thereby an increased vascular tension, giving rise in some cases to symptoms such as were present in this patient during the latter months of gestation. At the time of labor, the intra-cerebral vascular pressure is increased to such a degree that a serous exudation takes place, producing œdema of the brain-tissue and dropsy of the membranes. As the result of this *extra*-vascular pressure, a condition of secondary anæmia is mechanically brought about. This it is which produces the eclamptic spasm, each one of which bears with it new danger to the patient,—viz., an increase in the amount of the exudation, resulting finally in an œdematous imbibition of the nervous centres, which is fatal. Not only in the brain, but also in the lungs, is this increased vascular

* Review of Fordyce Barker's pamphlet on Bloodletting in Obstetric Medicine, *Medical Times*, May 1, 1871.

tension productive of mischief, for some cases which survive the convulsions die after labor of œdema of the lungs. Hence the diminution of this vascular tension becomes an *indicatio vitalis*. The lancet is the readiest means, but the relief is not always immediate; a certain amount of time is requisite to regulate the new conditions of intra-vascular pressure, and any agent which will rapidly diminish this tension of the vessels will, *a priori*, check the imminent spasm and abort the attack.

This is the first action of the nitrite of amyl, and this property led Dr. S. Weir Mitchell to suggest its use to me in cases of puerperal eclampsia. In this individual case its action in arresting the spasm was immediate and satisfactory. Its use carries with it, I fear, however, a certain amount of danger. It relaxes also the muscular system, and the profuse post-partem hemorrhage I had to deal with after the uterus had once firmly contracted may perhaps have had its origin in the use of this drug. I am the more inclined to think that this explanation has in it something of truth, because I have heretofore found a much weaker solution of the persulphate of iron than is usually employed sufficient to check the hemorrhage, while in this case the muscular contraction which it excited was of so unsatisfactory a character that I was led to increase the strength of the solution.

The small amount of hemorrhage which took place immediately after the expulsion of the placenta seems to have been sufficient to check the development of the convulsive seizures for some time, and to restore the patient to consciousness, but, unfortunately, did not sufficiently diminish the vascular tension to prevent their recurrence.

The cloudiness of intellect which usually remains in these cases for some days after the convulsions have ceased shows that in most cases a certain amount of œdema of the cerebral tissue results. As the effusion is absorbed from the body in general, this cerebral œdema gradually disappears.

ON SOME CASES OF EMPHYSEMA OF THE NECK

DUE TO LESIONS OF THE RESPIRATORY APPARATUS.

BY WILLIAM PEPPER, M.D.

(Continued.)

HAVING already spoken of emphysema of the neck as connected with lesions of the larynx and trachea, it remains to allude to the more rare cases in which it appears in connection with injuries or diseases of the tissues of the lungs. There are two ways in which such lesions may become associated with external emphysema. In the one case the air escapes directly from the lungs into the subcutaneous cellular tissue, while in the other it finds its way from the air-vesicles into either the subpleural or interlobular connective tissue, and thence gradually to the root of the lung, and then ascends by the mediastinum to the neck. Examples of the first variety are occasionally met with in tuberculous disease of the lung when there is close adhesion of the two surfaces of the pleura over the seat of a superficial vomica, in whose walls ulceration advances until finally perforation of the layers of the pleura is effected, and a direct communication is established between the pulmonary cavity and the subcutaneous tissue. These cases are undoubtedly very rare, since it usually happens either that no adhesions have formed over the seat of the perforation of the pulmonary layer of the pleura, and that consequently the air escapes into the pleural cavity and constitutes a pneumothorax, or else the adherent layers

of pleura offer so powerful a resistance as to check the advancing process of ulceration. Emphysema due to such a cause is, however, readily recognized, whenever it occurs, by the fact of its sudden appearance immediately over the spot,—in the great majority of cases the infra-clavicular spaces,—where there have previously been the physical signs of a cavity. The degree which such emphysema has been known to attain is extreme, extending even over the entire surface, and producing serious embarrassment of breathing.

The other variety includes all those cases where the emphysema originates in the pulmonary tissue and reaches the subcutaneous tissue by way of the mediastinal spaces. This form has been carefully described by Henri Roger (*Arch. Gén. de Médecine*, 5ème S., tome xx., pp. 129, 288, 403) under the name of *emphysème généralisé*, and will be found briefly alluded to by most subsequent writers on disease of the lungs,—though the great rarity of the affection generally serves as an excuse for the omission of any illustrative cases or of any detailed description. The development of the external emphysema here depends primarily and essentially upon the occurrence of interlobular emphysema of the lungs. This is to be clearly distinguished from the more common variety, known as true pulmonary or vesicular emphysema,—a condition which, however, consists merely in the dilatation or coalescence of the pulmonary air-vesicles, without any necessary escape of air into the connective tissue of the lung, and therefore does not strictly merit the name of emphysema, but should rather be called rarefaction of lung-tissue, or merely dilatation of the pulmonary air-cells. The two varieties may be associated; though this does not seem to happen so frequently as might be expected. They usually occupy, however, the same position in the lungs: namely, the apices and anterior borders. Interlobular emphysema evidently must depend upon the rupture of some of the air-vesicles of the lung. If these are deeply seated in the substance of the lung, the air escapes into the interlobular spaces, whence it follows up the divisions of the bronchi, causing irregular enlargement of the cellular spaces, and finally gains the root of the lung. Much more frequently, however, the rupture occurs in vesicles lying close to the pleural surface, where we see the escaped air form small bubbles in the interlobular spaces, which may be moved along by the pressure of the finger, and often may be seen to unite with one another. When these bubbles are small and closely crowded together, the surface is studded with numerous small elevations of the pleura, producing an appearance which Rokitansky has aptly compared to that of froth. The air may force its way farther into the cellular tissue uniting the pleura to the lung, and may even separate that membrane to such an extent as to form flattish, movable air-bladders of considerable size. It sometimes happens that one of these distended sacs ruptures, and, by allowing the air to escape into the pleural cavity, gives rise to pneumothorax. It is easy to understand how the air may pass through the subpleural tissue, dissecting the membrane away from its attachments to the lung, until, reaching the point of its reflection on to the thoracic parietes, the gas escapes into the mediastinal spaces. The loose connective tissue there becomes highly emphysematous, presenting numerous large vesicles with delicate walls, and altogether resembling the appearances seen in animals in the slaughter-house. From the mediastinum the air readily passes upwards into the connective tissue of the neck, where it may first produce swelling in the supra-sternal, supra-clavicular, or infra-maxillary regions. It will thus be perceived that the form of external emphysema now under consideration is merely a complication of interlobular emphysema of the lungs, depending upon the escape of an excessive quantity of air from the pulmonary vesicles.

The question as to the mode of production of interlobular emphysema is a deeply interesting one, especially from its bearing upon the causation of so-called vesicular emphysema; and although the object of the present paper is rather to illustrate one of its occasional results, it will be found that the cases reported also afford illustrations of the causes. In this connection it is convenient to divide the cases of interlobular emphysema, whether accompanied or not by external emphysema, into those depending on a purely mechanical cause, and those where there is some pre-existing morbid condition which serves either as a predisposing or possibly as the actual exciting cause.

Under the first head are not to be included traumatic ruptures of the lung-tissue, produced by violent compression of the thorax, unaccompanied by laceration of the pleura, and giving rise to interlobular, mediastinal, and external emphysema. I refer rather to such cases as depend solely upon the violent muscular exertions of the patient,—as in the expulsive stage of labor, the paroxysms of cough caused by the presence of foreign bodies in the air-passages, or the convulsive efforts in hydrophobia. The most frequent of these varieties is the so-called obstetrical emphysema, or subcutaneous emphysema occurring during parturition, of which a considerable number of cases are on record. The following, which happened under my care some years ago, may, however, be given as a very illustrative example:

Case II.—Labor in a Primipara: Violent Expulsive Pains—Cervical Emphysema lasting Four Days.—H. O., primipara, aged 20 years, a large, strong, and florid woman; suffered much with nausea and vomiting during her first pregnancy. On the second day before her confinement she vomited violently, and the next day spat up one or two mouthfuls of blood-stained mucus. The first stage of her labor was lingering and tedious, but the os finally dilated well, and expulsive pains began. The child's head was large, and the soft parts were very rigid, so that, although the pelvis was roomy, the second stage lasted five hours, with very frequent, protracted, and violent expulsive efforts, during which her face became purple, and the vessels of the neck distended to an alarming degree. The labor was successfully completed, and the child did well. The following day she complained of soreness of the neck, and, on examination, marked subcutaneous emphysema was found. The swelling was most marked on the right side, where it extended from the jaw downwards to two inches below the clavicle. On the left side it was limited to the anterior cervical triangle. Percussion over the emphysematous skin on the right side gave a tympanitic note, as low down as the second rib. The respiratory murmur at the right apex was feeble and somewhat blowing. She had been conscious of no peculiar sensation at any time during her labor, and was entirely ignorant of the existence of the emphysema. Her voice was a little hoarse, but there were no bloody sputa, no soreness of the larynx, and no difficulty of deglutition. The only treatment adopted was gentle friction over the swollen parts. The emphysema disappeared from the left side in forty-eight hours, and from the right side in about five days. Normal percussion-resonance and respiratory murmur returned at the right apex in the course of three or four days. The patient made a rapid and uninterrupted recovery.

In this case it will be noticed that the emphysema extended to both sides of the neck, though much more marked on the right side. The same was the case in an unpublished instance of obstetrical emphysema occurring in the practice of my friend Dr. De Forrest Willard.

Case III.—Labor in a Primipara: Violent Expulsive Pains—Cervical Emphysema lasting Six Days.—The patient was a stout young Irish girl, aged 18 years, in labor with her first child. The labor was natural, but during the second stage the pains were violent, and the girl became unmanageable, throwing herself about on the bed, and strain-

ing with such violent and prolonged efforts as even to arouse uneasiness on the part of her attendants. Immediately after the completion of the labor it was noticed that there was marked subcutaneous emphysema extending over the right cheek, the right side of the neck, and for about one and a half inches below the right clavicle; it also extended slightly over the left side of the neck. There were no abnormal physical signs detected in any part of the lungs. The emphysema soon reached its highest point, when the swelling was very considerable, after which it diminished, and disappeared in about six days.

In these, as in all the recorded cases of subcutaneous emphysema occurring during parturition, the patients were primiparæ, and the second stage of labor was attended with unusually violent expulsive efforts. The conditions which favor the occurrence of such an accident during parturition are evident, and will on consideration be found essentially the same as are present in the other forms of mechanical emphysema above mentioned. Immediately preceding the expulsive effort the lungs are inflated to their fullest capacity, and the glottis is then firmly closed. The diaphragm being thus depressed, the muscles of expiration are brought into powerful action to compress the thorax, and thus exert a strong downward pressure upon the diaphragm and the contents of the abdominal cavity. The air which fills the lungs and air-passages is necessarily subjected to enormous pressure even in ordinary cases of labor; but when, from any cause, the descent and expulsion of the foetus are arrested while the expulsive efforts continue violent and prolonged, no relief to the pressure is afforded at the lower outlet, and the intra-thoracic tension is greatly increased. Often the glottis is instinctively opened, giving escape to a portion of the air, and thus relieving the tension. But when the patient is strong, and, furious from her agony, becomes uncontrollable, and strains with intense and unduly-prolonged violence against an unyielding resistance, it is a matter of wonder that ruptures of some part of the respiratory apparatus are not of more common occurrence. It is probable, indeed, that such a rupture may take place at any point between the trachea and the air-vesicles; and the opinions of authors are divided as to the most frequent seat of the lesion. Thus, Demarquay (*loc. cit.*) holds that it is usually in the trachea, chiefly because the emphysema is, as a rule, much more marked on one side of the neck; whereas, in cases where the air has escaped into the interlobular connective tissue of the lung and reached the neck by way of the mediastinum, the emphysema is more apt to be symmetrical. This single consideration (which is not without exceptions) seems, however, insufficient to counterbalance the strong anatomical arguments which render it probable that the first part of the respiratory apparatus which would yield to the excessive strain would be the air-vesicles of certain parts of the lungs. The tissues composing the trachea and primary bronchi are so firm and yet so elastic, and the position of these tubes allows of such free distention, that it would certainly require a prodigious degree of pressure to produce a rupture of their walls. Add to this the fact that the occurrence of emphysema during labor is usually unattended with sharp pain in the line of the trachea, with much cough or bloody expectoration, or with dysphagia, which would appear unavoidable in case of actual rupture of that tube. Further, obstetrical emphysema is rarely very extensive, soon reaches its maximum, and then gradually diminishes, and usually disappears in the course of a week; whereas if there were a rent in the tracheal walls the resulting emphysema would be likely to be both more extreme and more persistent. It is difficult to furnish, on the other hand, positive evidence in support of the view that the escape of air takes place from the pulmonary air-vesicles, since there is no recorded case in which

death has occurred during the existence of obstetrical emphysema; and, as has already been said, there are no physical signs by which interlobular emphysema of the lung can be recognized during life. However, the considerations that have been advanced above, and the entire analogy of these cases with others which will be referred to where the cervical emphysema is known to have followed rupture of the air-vesicles of the lung, seem to leave no doubt that such is also the source of obstetrical emphysema.

(To be concluded.)

EPIDEMIC DUODENITIS.

BY JAMES D. MCGAUGHEY, M.D.,

Wallingford, Conn.

WHILE practising medicine in upper East Tennessee, I met, during the winter and spring of 1870, a disease, epidemic in character, to which I could give no other name than that of duodenitis. The neighborhood where most of the cases were seen has always been free from any miasmatic diseases, and there have never seemed to exist any conditions favoring the generation of such. I thought the disease at first endemic, but have since understood a disease with similar characteristic symptoms prevailed in other parts of the State. Where I saw it, the cases were all in one neighborhood, scattered over several miles of a mountainous district, through which runs a large mountain-river with a rapid current, the banks being very high, and generally composed of limestone rock. People residing on the northwest side of the town (Greenville), upon low swampy grounds, were free from the disease; while those on the more elevated mountainous lands on the southeast were attacked. From the appearance of the skin in those who were sick, the common people called the disease "yellow-skin."

The first case I was called to see was that of G. E. S., aged 46, miller by occupation; an active, energetic man, but who, for some time previous, had been suffering from ill health caused by rheumatism and pleurisy. When I first saw him he had been sick eight days, and had been under the care of another physician. His symptoms were as follows: a gnawing, constant, uneasy pain in the duodenal region; tenderness on deep pressure over the left edge of the right hypochondrium, and around the pyloric end of the stomach, traceable sometimes as far down as the umbilicus; obstinate constipation; his bowels had not been moved since the beginning of the attack eight days previously, having resisted all the cathartics that had been given; micturition difficult and painful; vomiting almost stercoraceous; great anorexia—in fact, complete disgust for food; the gums had a heavy pale-blue line on their margin, like that seen in lead-poisoning; pulse slow, deliberate, and full; tongue coated heavily; skin dry and rough; respiratory organs not noticeably affected; but little tympanites. Such was the case February 2. On the 3d, there being no improvement, I gave him a large dose of castor oil with three drops of croton oil, to be repeated if the bowels were not moved in a specified time. 4th, still no passage; and the suffering was so great as to require the prompt use of anodynes. Injections were freely given, combined with the use of pills of aloes, rhubarb, and compound extract of colocynth. 5th, no improvement, and no passage from bowels; pulse full but slow; great pain of a colicky nature; micturition almost impossible. Treatment continued as on the 4th, the injections having been made more stimulating. 6th, one or two small liquid discharges, mostly of injection-material that had been retained. 7th, no change. Gave a large dose of castor oil with four drops of croton oil; six hours subsequently, I took a No. 11 catheter and fitted it to the infant nozzle of a Davidson's syringe. I then cut off its vesical end, and attached the whole to the syringe. By pressing this extemporaneous rectal tube up the bowel, keeping the injection-fluid a little in advance,

it readily passed up. Through this I injected into the colon four to six pints of a very stimulating fluid. In a half-hour the injection came away, bringing a quantity of lumpy fæces, gas, etc. On the 8th the bowels were moved freely, and the patient was greatly relieved, the tenderness of the duodenal region disappearing. In a day or two great improvement was manifest: the skin became of a better color; the pulse softer, and got up to a healthy standard; the urine passed more freely. With gentle purgatives, and a quinia, iron, and strychnia tonic, the patient recovered in a short time.

Very soon after seeing this case, eleven or twelve others came under my observation; besides which, as many more cases were seen by neighboring physicians. All the cases I saw, and all those seen by other physicians, as I learned from them, commenced with the same general symptoms, such as malaise, headache, inability to keep on foot; after a day or two, or sometimes immediately, came *pain over the region of the duodenum*, sometimes very severe at the left edge of the right hypochondrium, around under the stomach, extending down towards the umbilical region; and pain in the region of the first or second lumbar vertebra. In some cases I thought the liver was implicated as well as the duodenum, but no enlargement of that organ could be detected. The pain was mostly of a gnawing, uneasy character, yet sometimes assumed a paroxysmal form of a colicky nature, requiring to be subdued by anodynes. In all the cases I examined there was tenderness on pressure, extending pretty much over the same regions as the pain. Deep pressure in the neighborhood of the pylorus would sometimes reveal tenderness when no pain was complained of. The next symptom in prominence—one met with in every case, and more or less stubborn—was constipation,—the most obstinate I ever saw: resisting for several days castor oil and croton oil, elaterium, colocynth, etc., and injections. Generally, on the third, fourth, or sixth day after the pain and tenderness commenced and constipation existed, jaundice would make its appearance. Synchronous with jaundice, or generally heralding its coming, the pulse would commence falling; and in one case it remained at 48 and 50 for several days. I suppose this depended upon the retained bile being reabsorbed into the system, acting as a sedative to the circulation through its depressing influence on the nervous system. The mind was in some cases depressed and gloomy; markedly so, in the case just mentioned, after the skin became jaundiced. In almost every instance the urinary organs became involved: difficult micturition, pain in the bladder, and an unusual liability to strangury from using turpentine. I suppose this can be explained by the urine, which was high-colored and acrid, irritating the mucous surfaces over which it passed.

I saw no other case in which there was such terrible vomiting as in that related above; but a neighboring physician told me that one of his cases had such obstinate constipation as to produce vomiting almost stercoraceous in character. This latter patient came nearer dying than any other throughout the reign of the disease. The tongue was always heavily coated. I noticed in all my cases, with perhaps one exception, a light-blue line around the margin of the gums; it generally disappeared as the case began to improve. Circumstances surrounding and attending each individual case precluded the possibility of this line being caused by lead-poisoning. The duration of the disease was, on an average, from ten days to two weeks. Many patients, after recovering, suffered from dyspeptic symptoms,—costiveness, poor appetite, etc.

The treatment I found most useful was, first, active purging; second, the free use of ipecac; third, blisters of cantharides over the tender points. Generally, after free purgation, a thorough relaxation with ipecac, and a cantharidal blister, the pain began to decrease, the

tenderness to subside, the tongue to clean off, the jaundice to disappear, the pulse to rise to a healthy standard, and convalescence to be established. Diluents were necessary for the urinary organs. Quinia, iron, and strychnia were given, with the occasional use of turpentine, to restore tonicity to the bowels, to get them to work healthfully, and also to bring up the strength of the system.

A SIMPLE METHOD OF ARRESTING EPISTAXIS.

BY ROLAND G. CURTIN, M.D.

WHILE resident at the Philadelphia Hospital, I resorted to the following plan of arresting epistaxis, with entire success:

I was called into the medical ward one night to a patient bleeding profusely from the nose, the simple measures usually resorted to—as cold, solution of tannic acid, alum, etc.—having failed to control it. Not having any of the more efficient means usually employed for the arrest of such a hemorrhage, and seeing the dry tannic acid on the table, I remembered the directions given in cases of infantile coryza by Dr. Albert H. Smith, of this city, for softening the hardened secretion in the nostrils. He recommends the introduction of lard upon a small roll of fine linen wrapped like an ordinary lamplighter.

It occurred to me that a similar roll of paper, moistened with water and coated with the dry tannic acid, inserted into the nose, might be of service. I tried it, with immediate success.

I have since found that old linen answers the purpose better than paper applied as above, as it makes a better carrier, being softer, more flexible, and less liable to break down through excess of moisture. I have also found that the powder adheres better if soft lard be used instead of water.

Any powdered styptic may be employed in the same manner. This plan presents the advantages of being always practicable, and of bringing the powder directly in contact with the mucous membrane without danger of wounding it or of breaking down the delicate turbinated bones.

I have tried this repeatedly with uniform success, and believe, if it were resorted to, that the disagreeable operation of plugging would seldom be found necessary.

332 S. SEVENTEENTH ST., PHILADELPHIA.

BLOOD-POISONING FROM THE BITE OF A RAT—SINGULAR PHENOMENA—RECOVERY.

BY JOHN H. PACKARD, M.D.,

Philadelphia.

W. T., æt. 7, a very stout and healthy boy, was bitten severely in the left forefinger, between the knuckle and the first joint, by a rat which he had caught. Fearing punishment for playing in the street, he told his parents that he had cut his finger, and concealed the real nature of the injury for nearly two weeks, when I was called to see him. The soft parts about the phalanx were now (June 11) enormously swollen, purplish red, and shining, the hand somewhat puffy, and a gland as large as a chestnut in the anterior fold of the axilla. He had some fever, especially at night, and was listless and without appetite.

Next day I made a free incision into the swollen finger, but very little pus escaped. He was put on the use of the muriated tincture of iron, with a febrifuge at night, and poultices applied locally. The symptoms all subsided; but on June 18 I was again called to see him, as he had a chain of small glandular enlargements all the way up the forearm and arm, and the swollen gland in the axilla had increased to the size of a walnut. By the third day, under hot sponging, often repeated, the lumps had gone; but

June 27 he presented a most curious phenomenon: patches, as if the skin had been bruised, very slightly raised, of a pale purplish mottled brown color, extended up the radial side of the forearm, and around the front of the arm to the axilla, up in front of the shoulder, and on the side of the neck to the head. One separate patch existed on the middle of the forearm, and another near the anterior axillary fold. A large patch occupied the axilla. Many similar but less vivid patches existed on the body, and even down on the legs. Each patch had a red rim clearly marking the line between it and the healthy skin. The only tender one was that on the left side of the neck; but he complained somewhat of soreness all over him, apparently muscular. There was, however, no stiffening of the jaws, or other sign of tetanus. For several nights he had high fever. Under the steady use of the iron, with hot sponging, all these symptoms abated, and on July 2, as he was to all appearance well, I ceased to attend him.

July 15.—I saw him again, and found that he occasionally had a reappearance of the patches, but very faint, and with no constitutional symptoms.

I am hardly prepared to offer any comments on this case, which, however, seems to me to be a very curious one. The gradual onset of the symptoms, and the slowness with which they succeeded one another, the disappearance of the chain of small glands, and the subsequent staining (after the lapse of a week) of the skin over so large a portion of the surface with what must have been disorganized blood, and the seeming inadequacy of the constitutional disturbance, are the main points which impressed me. From these facts—the sluggishness, if I may so speak, of the local phenomena, and the lack of grave general symptoms—I was induced to give a guardedly favorable prognosis, which was happily verified.

1928 SPRUCE STREET, July 15, 1872.

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE.

SURGICAL CLINIC OF PROF. S. D. GROSS.

Reported by FRANK WOODBURY.

LECTURE ON INFANTILE PARALYSIS.

A PALE-LOOKING boy, thirteen months old, was brought to the clinic, May 4, from New Jersey. There was complete paraplegia of the lower extremities, and but little power of motion existed in the arms. He had been afflicted in this way almost from birth. He had control of the sphincters of the bladder and rectum, and the digestive function was well performed, although his appetite was poor. The temperature of the affected limbs was normal, but their muscles were atrophied. His growth seemed retarded, and his body was poorly developed. Though more than a year old, he had cut only six teeth. He appeared anæmic.

R.—Tinct. ferri chloridi, fʒj;

Tinct. nucis vomice, fʒij;

Hydrargyri chlorid. corrosiv., gr. iv. M.

S.—Take five drops three times daily in a tablespoonful of sweetened water.

R.—Ung. hydrargyri, ʒiij;

Cerat. simplicis, ʒv;

Veratria, gr. vi. M.

S.—Put a piece the size of a marrowfat pea, twice a day, over the entire spine and along the back of the limbs.

Apply the ointment gently at first, until the parts become accustomed to its use. Wash the child every day with tepid water containing a tablespoonful of common salt to the quart. After bathing, wring the end of a towel out of cold water, and with it strike the entire surface of the body, quite smartly,

until the skin is reddened. This treatment to be continued for a month; at the end of which time his mother was directed to bring the child back.

This is a case of a variety of nervous affection known as infantile paralysis. In this affection both lower limbs are generally attacked, although the loss of power may not be equal on the two sides, one leg possessing more motion than the other. The paraplegia, however, is sometimes complete. In all these cases the sensibility of the parts is preserved, or if affected at all is never entirely destroyed. The loss of power extends to the muscles of the thigh, and produces inability to flex the limb upon the pelvis, and may include the perineal muscles, causing incontinence of urine and want of power to retain the contents of the rectum. This disease is met with in young children about ten months old, occurring either during teething or a little before or after, from which circumstance it derives the name of infantile paralysis. Its attack is generally sudden and without previous warning. The child is put to bed at night apparently well, with a good appetite, and nothing to indicate the onset of the disease. During the night he perhaps wakes up thirsty, and appears restless and feverish. When the mother goes to him in the morning she finds the lower limbs powerless and generally lowered in temperature. The affection is generally confined to the lower extremities, very rarely implicating the arms. It may be limited in its extent to one limb, or it may involve all the extremities, making the child perfectly helpless though still retaining its intelligence.

The pathology of the affection is manifestly some lesion of the spinal cord, the brain being unimpaired in the exercise of its functions, and the special senses unaffected. The suddenness of the attack, and the paralysis of a set of nerves taking their origin from a particular portion of the spinal cord, point to a lesion affecting a limited extent of that structure or its membranes. By inflammation of the theca, generally the arachnoid, there is produced an effusion of serous fluid into the subarachnoid space, which infiltrates the surrounding areolar tissue. This inflammation extends to the sheaths of the nerves, producing thickening. In this way the nerves are compressed by the effusion and by their investments in the intervertebral canals, thus interrupting the nerve-fluid or current. Paralysis follows in those muscles which obtain their nervous supply from trunks which have their action interfered with at the seat of the disease.

This affection is very obstinate, and does not respond well to treatment; in the majority of cases the paralysis remains, crippling the patient for the rest of his life. After some time, the muscles become soft and atrophied, and their fibres finally undergo fatty degeneration. When this condition is fully established the muscles are changed, and have lost the power of performing or regaining their proper function. The case then is not amenable to treatment, and the patient will remain a cripple for life. The health generally continues unimpaired, and nutrition, other than in the affected parts, is well carried on. The other portions of the body develop in size and strength with the growth of the child, forming a striking contrast with the paralyzed limbs, which retain their original size, or are slightly atrophied.

However, before this condition of fatty degeneration is complete, the patient may improve by judicious and persistent treatment. The condition of the muscles may be ascertained by means of the galvanic current, which is also our most efficient therapeutic agent in the treatment of these affections. If the integrity of the muscles is not entirely destroyed, they will respond to the application of electricity, which is to be applied as a means of diagnosis. If they are insensible to the current and do not contract, the prognosis is unfavorable. To derive the greatest benefit from electricity in the treatment of this affection, it is essential that the interrupted current should be applied as early as possible in the course of the disease, and used once or twice every day. Our attention, however, should be directed mainly to the spine. If my opinion regarding the pathology of the affection is correct,—that it is produced by pressure, due to inflammation, on the nerves at their origin,—then counter-irritants and sorbifics would be useful. Bleeding, either by leeches or cut cups, and blisters, produce good effects if used early, and some benefit may be derived from rubefacients and dry cupping

immediately over the lesion. To my mind, the best and most efficient means of treating the disease is by establishing, with a red-hot iron, a good issue over the affected spot. The eschar formed comes away in a few days, leaving an ulcer, which should be encouraged to discharge freely. I am satisfied that this agent is not used so much as it should be. It is a valuable adjunct in the treatment of nervous diseases caused by subacute inflammation, or by a deposit the result of inflammation existing in the spinal cord or its membranes. It should have the preference over any other means of causing an issue, in the treatment of all protracted and obstinate diseases where a counter-irritant or revulsive effect is desired,—as in Pott's disease of the spine, or in hip-joint disease, where as a topical agent it is unequalled.

During the treatment the muscles must be rubbed and shampooed, and steadily exercised with the battery. The general health must be maintained by alterants and tonics, if necessary. Special attention must be paid to the secretions, and the patient should be carried daily in the fresh air. If the disease has not progressed too far, by careful attention to the nourishment of the little patient, and perseverance in the line of treatment indicated, the best results may be hoped for.

OPERATION FOR INVERTED TOE-NAIL.

W. C., 18 years of age, complained of an affection of the nail of the great toe, for which he came before the class May 15. The internal border of the toe-nail on the left foot grew into the flesh at its side, and gave rise to inflammation and pain, thus interfering with the use of a shoe, and crippling him in walking.

Affections of the feet and toes, with more or less deformity, are quite common. They may be congenital, or be produced by paralysis or rheumatism; but the most prolific source of these disorders is the habit of wearing badly-fitting shoes, particularly those which are too short.

Corns are formed by a hypertrophy of the cells of the epidermis, accompanied by local inflammation of the superficial portion of the true skin, and the effusion of lymph. They are found generally on the toes, but may be produced by the same causes in other parts of the body, as in the hand or the sole of the foot. They are caused by the irritation produced by pressure being followed by inflammation and effusion. Corns are divided into hard and soft, not on account of any essential difference, because they are anatomically the same, but for convenience only. The soft variety occurs only between the toes, and derives its name from being kept constantly moist by the perspiration of the part. In both varieties there is frequently a little serous cyst at the bottom of the corn immediately over the true skin. Corns are sometimes the seat of severe pain and inflammation, and become so tender and painful as to interfere with walking. In treating them, the inflammation should be reduced, and the thickened cuticle pared or scraped away and the surface touched with nitrate of silver or tincture of iodine. This is to be repeated until the cure is effected. To attain this, the tight shoe must be discarded, and one made which is more carefully adapted to the shape of the foot.

Bunions generally occur over the first metatarso-phalangeal joint, appearing but rarely on the corresponding joint of the little toe. They are caused by inflammation and induration of the mucous bursa over this joint. This affection is frequently accompanied by malposition of the great toe, the phalanx of which is forced strongly outward, encroaching on the other toes, making an angle with the inside border of the foot, which is made more marked by the projection over the articulation. This is quite common, and is produced by wearing a shoe which is too short and too narrow for the front part of the foot. An abscess sometimes forms in the sac of the bunion, which requires an early and free incision down to the bone. If the joint is much inflamed, it is to be treated by rest and acetate of lead and laudanum. In ordinary cases, if there is no inflammation, the bunion may be cured by laying it open and excising the sac; but if the parts and system are not well prepared, dangerous erysipelas may follow the operation. Where the patient is crippled, and the joint is the seat of constant suffering, amputation may be performed through the metatarsal bone.

Produced by the same causes frequently, and met with quite

as often as the bunion, is another affection of the toes, which is known as inversion of the toe-nail, or merely ingrowing nail. This trouble is not necessarily confined to the great toe, although it generally occurs in that situation. It consists of the ingrowing of the edge of the nail into the integument, and produces inflammation and severe suffering. There seems in some families to be a congenital tendency to this affection. I have seen numerous instances where several members of the same family have been thus afflicted, and where it would almost seem to be hereditary. This incurvation of the edge may be confined to one side, or may exist on both borders of the nail, affecting them generally unequally. The pressure exerted on the soft parts gives rise to pain in walking. These parts finally inflame and swell, producing what is called proud flesh. This may be followed by gangrene.

This affection may be caused by pressure of a boot, but more frequently arises from cutting the nail too short, thus allowing the integument to rise above it and bury the edge in the soft parts. This condition is persistent, and can only be relieved by an operation. The one which consists in scraping a gutter in the nail, in order to invite straightening, hardly produces even transient relief, and is generally without any effect whatever. Paring away the inverted portion of the nail, and removing the thickened integument at the side, may act as a palliative, but the disease will, in most cases, return. The best treatment, and the one calculated to give the best result, is excision of the offending portion of the nail. The operation of removing the entire nail, as performed by Dupuytren, is barbarous and unnecessary. The better operation is performed in this way: the point of a strong scalpel is inserted at the root, and the nail divided its entire length, on a line with the ingrowing border, and about half an inch inside of it, at its termination. The wedge-shaped portion of the nail thus embraced is then dissected off, including the root; and the operation is generally followed by a radical cure.

[This operation was performed on the patient, and the toe directed to be surrounded with a dressing wet with the anodyne and saturnine solution, and the foot ordered to be kept at rest and elevated.]

A CASE OF HYDROCEPHALUS.

W. W., æt. seven weeks, was brought to the clinic May 11. His head was very much enlarged, and the fontanels were wide open and expanded. The subcutaneous veins of the scalp were dilated and enlarged, and their course could be easily traced under the skin. His complexion was waxy, and his eyes were small and seemed only half open. His mother stated that he was fretful at night and during the day. She was obliged to carry him on a pillow, for fear that by a sudden movement of the heavy head his neck might be broken. The child's head was large when it was born, but it had since then greatly increased in size.

This affection is known as dropsy of the brain, or hydrocephalus, and is due to intra-uterine arachnitis, or inflammation of the serous membrane covering the brain and lining the ventricles. The effusion may take place either in the sub-arachnoid space or in the ventricles, and may vary in quantity from a few ounces to several quarts. This, when it exists in considerable quantity, compresses and flattens the brain-tissue against the floor and sides of the encephalon. The idea that this is due to effusion between the dura mater and the skull is incorrect, as the dura mater is a fibrous membrane, and cannot secrete water any more than fibrous tissue in any other part of the body. The fluid is perfectly clear, slightly saline, and free from albumen. In this respect it differs from the fluid effused in hydrocele, which is coagulable by heat, alcohol, and the dilute acids, showing its affinity to the serum of the blood. The liquor of hydrocephalus is exactly like the cephalo-rachidian fluid, and the affection strongly resembles spina bifida, or hydrorachitis. For a wise purpose, nature has not placed albumen in the cerebro-spinal fluid, as under certain circumstances it might coagulate, and thus produce compression.

This disease exists previous to birth, which accounts for the effusion being present when the child is born. The fluid rapidly increases in quantity, the head containing, in some cases, more than a gallon, diffused over the surface of the brain and in the ventricles. There has been much diversity of opinion regarding the pathology of this affection. We know that a child may have an attack of peritonitis, before birth, with-

out assignable cause, and there is no reason for doubting that an attack of chronic or subacute arachnitis may take place under similar circumstances. The compression that the fluid makes on the hemispheres affects the special senses. Hearing and sight are impaired, and the child is idiotic and speechless. The power of locomotion is absent, owing to the compression of the nerves at the base of the brain and of the spinal cord. This is generally accompanied by loss of control over the contents of the rectum and bladder. The patient may live for fifteen or eighteen years before he succumbs to the disease; but such instances are very rare, the affection generally proving fatal within a few months or a year. The prognosis therefore is bad: if the patient lives it will have only a vegetable existence.

Various means of treatment have been recommended for this affection. In its early stage some good may be derived from the use of sorbefacient applications, with a carefully-regulated diet, and an occasional laxative. The scalp has been shaved, in some cases, and blisters applied, without any benefit. Systematic compression with a bandage and adhesive strips has been recommended, but it invariably causes convulsions. Paracentesis of the skull has been tried, and the pressure of the brain relieved by a small portion of fluid being abstracted from day to day. If too large a quantity is taken away at once, convulsions are immediately produced. The function of the cerebro-spinal fluid is to equalize the pressure on the brain and spinal cord; and if this equilibrium is disturbed, convulsions follow. If a very small portion is drawn off at a time, with a delicate trocar or the needle of a hypodermic syringe, the operation might be successful. Indeed, if we could credit the statements that have been made about this operation, we could not doubt its propriety and advisability. Dr. West has collected the records of sixty-three cases in which the operation was performed, in eighteen of which it was successful. Dr. Conquest states that he cured ten out of nineteen in this way. But these statements are unreliable, not because of wilful misstatement on the part of the compilers, but simply because they allowed themselves to be deceived. In two cases in which I performed the operation the patients died within four days, of convulsions. I have never, myself, heard of a radical cure being obtained in this way.

The case is hopeless. I feel loath to interfere, because in such a case the surgeon simply becomes the executioner of the child. I therefore refuse to operate, because I consider the child beyond treatment.

[Two weeks afterwards the patient died in convulsions. The following notes were taken at the autopsy. The length of the child was twenty-three and a half inches; its age was nine weeks at the time of death; the thumbs were folded in over the palms, and the fists tightly clenched, showing spasm of the flexor muscles. The measurements of the head were as follows:

Occipito-frontal, or horizontal circumference above the ears,	22 $\frac{1}{4}$ inches.
Occipito-mental, or diagonal " "	23 $\frac{1}{2}$ "
Occipital-parietal, or vertical " "	behind the ears, 21 $\frac{1}{4}$ "

The upper portion of the calvaria was entirely membranous. Two centres of ossification, about two inches in diameter, existed at the situation of the parietal bases, from which lines of ossification radiated in all directions. On opening the cranium, the ventricles were found to be so distended that they occupied the entire vault of the cranium. The brain was represented by a thin sheet of nervous tissue, lining the interior of the calvaria, thicker at the base and front part, but hardly demonstrable at the vertex. The septum lucidum divided the cavity into two, which communicated through the foramen of Monroe, which measured one inch and three-quarters in diameter. The contained fluid measured seventy-six fluidounces, and was clear and limpid. On using the appropriate tests it was found to contain no albumen or sugar, but held in solution a considerable quantity of chloride of sodium. Its reaction was not evident.]

INCONTINENCE OF URINE IN EPILEPSY.—M. Legrand du Saulle, in a recent communication (*L'Abeille Médicale*, June 16, 1872), dwells upon the importance, in a medico-legal point of view, of incontinence of urine, especially when intermittent, in the diagnosis of epileptic mania.

M. CERSOY, of Langres, writes to the *Bulletin Général de Thérapeutique* for June 15 that in the treatment of the hemorrhagic form of smallpox he endeavors to produce an artificial eruption by means of the external application of croton oil or of tartar emetic.

HYDROPHOBIA WITH ENDOCARDITIS.—Surgeon A. M. Vachere reports in *The Indian Medical Gazette* for April a case of hydrophobia which was complicated by endocarditis.

PHILADELPHIA MEDICAL TIMES.

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EDITORIAL.

HOSPITAL POSITIONS.

WE chronicled in our last issue the fact of the reinstatement of Drs. Hall and Levis in their former positions of Attending Surgeons to the Wills Ophthalmic Hospital in this city; and, inasmuch as we have already expressed our sense of the justice thereby done these gentlemen, we should be disposed to let the action of the Board of City Trusts in the matter pass without further comment, were it not that the occasion seems appropriate for directing attention to the manner in which a medical officer is occasionally discharged, and in which a vacancy occurring in the medical staff of a hospital is filled by the management.

The two gentlemen already alluded to were Attending Surgeons to the Wills Hospital before the recent reorganization of its staff; and the action of the Board of City Trusts, after they had been dropped from the active staff, in first electing them Emeriti Surgeons and then in reinstating them as Attending Surgeons, is at least presumptive evidence that they had always performed their duties acceptably; and yet, because one was absent from the country, and the other thought that his past services rendered it unnecessary for him to take an active part in the canvass, they failed of an election. The course that the Board has recently taken, if it means anything, indicates that a wrong has been committed, which it now recognizes and is anxious to repair by an act of tardy justice. The annoyance which Drs. Hall and Levis have suffered would, however, have been spared if the Board had been better qualified to judge of the relative merits of the candidates, and had contained among its members at least one or two physicians. The judges of our courts, when they made their appointments to this Board, were probably guided partly by personal preference, but also in the majority of instances by a desire to place upon it men who would command the confidence of the community. It is probable that they thought very little, if at all, of the qualifications of those they were selecting to properly conduct a hospital. It may be said that there are not many physicians who have much financial ability,—although we know of some who would inspire as much confidence in this respect as one or two members of the Board,—but there are many points in the management of Wills Hospital, and, indeed, of some of the other institutions under

the same management, in which the advice of an intelligent physician would be of great advantage. It is true that in cases where such advice is required it can always be obtained from the medical officers of the institution; but practically, although we believe that there is a growing disposition on the part of managers to listen to the suggestions of the medical staff, no hospital will be found to be well conducted in which there is not a medical element in the controlling body. The ventilation of wards and the diet of the sick are among the subjects to which many physicians have given careful attention, and with which gentlemen who may be good business-men are not necessarily familiar. These Boards are, moreover, practically close corporations,—for they have the power of filling their own vacancies, and they may perhaps be as much influenced in making their selections by the desire to secure a pleasant companion as by any other feeling.

We should be very glad if it were possible to introduce into this country the plan of competitive examinations pursued in France in filling vacancies occurring in the staff of a hospital. In one hospital in this city the candidate for the position of resident physician must first pass an examination before he can be elected; but the Guardians of the Poor, who have charge of this hospital, have somewhat nullified the effect of this excellent regulation, for, although they have never elected an applicant who has been rejected by the examining board, they have not in all cases been guided by its recommendations in making their appointments. We do not see why every hospital position should not be open to competition of this kind. It has sometimes been asserted that men of undeniably great ability and knowledge will fail at an examination, and that, if this plan were adopted, it might occasionally be prejudicial to the interests of the sick, as well as to those of science. But, even admitting that in a few instances it may be the cause of injustice, it seems to us less objectionable than any other plan. The interests of the profession are unquestionably advanced by having these positions occupied by gentlemen able to add by their observations to the general stock of knowledge of pathology, diagnosis, and therapeutics; and it would seem to be clearly the duty of those having the charge of institutions to select only those physicians who, in addition to this qualification, may be supposed to have a due sense of their obligations to the patients committed to their care. And yet, while we will not say that the skill of the candidate is entirely overlooked, it cannot be denied that it has occasionally happened that other circumstances have been allowed to have at least equal weight with the managers. It would not be difficult to prove that political influence has been freely used in some of the canvasses for medical positions that have taken place recently in this city, and, in cases where this would be of no avail, that the successful applicant has resorted to arguments founded upon the family, social, or business connections of the managers. If the hospital is under the exclusive control of a religious body, it would appear that sectarian feeling is appealed to; for it is diffi-

cult to explain in any other way the fact that the greater number of the medical officers of the Episcopal Hospital are Episcopalians, and that Presbyterians predominate in the recently-appointed staff of the Presbyterian Hospital.

We are happy to think that in many cases the choice of an attending surgeon or physician has been made solely with reference to his qualifications for the post; our object in calling the attention of the profession to this subject, is to induce it to exert whatever influence it may possess to bring about such a state of sentiment in the community that it will be made impossible for managers ever to elect physicians to positions of trust or profit whose attainments do not clearly entitle them to such an honor, or capriciously to dismiss those who have served an institution faithfully. And this we think can best be accomplished by the profession securing for itself representation in the managing Boards of all institutions in which it is in any way interested.

THE NECESSITY FOR PUBLIC BATHS.

THE daily newspapers inform us, from time to time, of the arrest of some unlucky urchin, who, in the indulgence of an instinct with which all boys are in a greater or less degree endowed by nature, has ventured to take a swim in one of our rivers within the city limits. We confess that in this matter our sympathies are rather with the law-breakers than with the law-makers. In a city like Philadelphia, where the summer heats are excessive and where two rivers flow tantalizingly through populous districts, the case seems a peculiarly hard one for the boys, especially as there are many parts of the city on either river-front where bathing might be indulged in without the smallest offence against propriety. During severe heat such as that of the last two weeks, frequent ablutions are not only essential to comfort, but also to health; and since many of the houses in which the laboring classes live are entirely unprovided with conveniences for bathing, a large portion of the community must therefore practically, under existing circumstances, dispense with it. It is true that there are in the city a few institutions where baths can be obtained either gratis or at such a price as to be within the means of the poor; but these are few, and entirely inadequate to meet the wants of the population.

We would therefore urge upon the city authorities the institution of free bathing establishments, which might be, as in Paris, floating bath-houses, where a very small sum only is charged for a bath. These would not only satisfy the requirements of cleanliness and of health, but would afford an opportunity for learning and practising the art of swimming. Until this is done, we would suggest such a modification of the city ordinance as will permit the exercise of that virtue which has been proclaimed to be next to godliness.

THE heavy rains of the past month, if not so likely to prove beneficial to vegetation, and to increase the amount of water in the springs and streams

of the neighboring country, as if the same amount of rain had been distributed over a longer period of time, have been of incalculable advantage to the citizens of Philadelphia in thoroughly cleansing the streets and in flushing the sewers of the city.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, JUNE 13, 1872.

DR. H. LENOX HODGE in the chair.

DR. J. H. CATHCART presented a specimen of *scirrhus of the mammary gland*.

Dr. H. LENOX HODGE exhibited the *head, neck, and trochanters of the femur*, removed by excision in a case of coxalgia.

The patient was eight years of age, and had been under treatment in the Children's Hospital for nearly two years. The disease progressed to the suppurative stage, and the child's health became more and more impaired. Excision was performed, and the head of the bone was found, as the position of the foot had indicated, out of the acetabulum and on the dorsum of the ilium.

The specimen exhibited ulceration of the cartilage, caries of the bone, and separation of the periosteum,—conditions which occur in the later stages of coxalgia: the entire head of the bone, and the under surface of the neck, extending to the lesser trochanter, were diseased.

Dr. HODGE also exhibited the *uterus and ovaries* removed from a young woman about twenty-five years of age, whose body was brought to the anatomical rooms of the University of Pennsylvania. The left ovary was occupied by a small cyst, which measured about two inches in length and about one inch and a half in width. It contained a thin reddish fluid. At one point the internal lining membrane was marked by a scar-like depression, and at another by two greenish-colored spots about a quarter of an inch in diameter. The left ovary was very much atrophied. The specimen showed that pelvic cellulitis had existed, extending to the left lateral ligament and ovary.

Dr. J. E. MEARS remarked that the specimen presented points of interest relating chiefly to the origin and development of ovarian cysts. Here was afforded an opportunity of examining the cyst in an early stage of development, and surrounded by the causes which might be regarded as instrumental in its production. He thought that inflammation had involved the ovary secondarily; that it had extended to it from the primary location in the pelvic cellular tissue. Attacking the ovary, it had produced a hyperplasia of its tunics which was sufficient to resist the escape of the ovum from the mature follicle. The amount of the fluid in the follicle continuing to increase, we would have, as stated by Rindfleisch, the beginning of an ovarian cyst.

The "scar-like depression" alluded to by Dr. Hodge he believed to be the remains of a small cyst, the walls of which had ruptured and which were being removed by absorption. In reference to the physical properties of the fluid contained in the cyst, he stated that, so far as related to its slightly viscid character, it partook of the nature of fluids contained in unilocular cysts, in which the fluid is, according to his observations, uniformly much less viscid than in multilocular cysts.

ORGANISMS IN VACCINE AND VARIOLOUS LYMPH.—Prof. Cohn, of Breslau, has found (*Virchow's Archives*, June 13) in vaccine and variolous lymph minute organisms which he believes to be micrococci, and which he proposes to call *Microsphæra*. He believes that these give rise to fermentation in the lymph, from which products are evolved capable, when inoculated, of causing the pathological processes known as variola and vaccine disease. He regards them as essential to the transmission of the disease, although not themselves the carriers of the contagious principle.

REVIEWS AND BOOK NOTICES.

CLINICAL LECTURES ON THE DISEASES OF WOMEN. By Sir JAMES Y. SIMPSON, M.D., D.C.L., etc. Edited by ALEXANDER R. SIMPSON, M.D. 8vo, pp. 789. New York, D. Appleton & Co., 1872.

This book belongs to classical medical literature, and deserves something better at our hands than a captious, or even a favorable, criticism. Simpson's work lies at the foundation of British and American obstetric culture, though lapse of time and increase of scientific knowledge may have dulled the memory of many to the fact. We forget what almost innumerable hints, suggestions, inventions, discoveries, novel applications of the discoveries of others, now grown to be household words and things, we owe to him,—as one often uses without thought the phraseology of the Bible. We read the work, therefore, at a disadvantage; we peruse page after page of original matter, and fail to consider it as such: it has been incorporated long ago into the vast body of medical knowledge.

Still, as one reads, he cannot fail to catch the inspiration of the book, and is fired by the wonderful spirit of the writer,—who was no specialist, plodding in some limited field, but like one whose paternal acres could not contain him, who must, when his task was done, burst out into the open fields beyond, and sow and reap another harvest.

From chloroform to sulphate of nickel, he was at everything,—poisoning himself and his friends with new drugs, shaping and re-shaping pessaries, till at last we have to pause and think what discoveries, what appliances in the treatment of female diseases, he did not originate or bring to light.

But since death has freed adverse critics from the danger of a reply from that pen,—always ready at launching literary thunderbolts of one sort or another,—they have rushed to the attack. For them the dead lion has no terrors: one calls him the "prince of quacks;" "Nobody cares anything about acupressure now," says another; "He didn't discover chloroform," cries a third, who may or may not know anything about it. There are certain writers whose mission in life it is to pick to pieces and destroy the characters of dead people, and disparage their works: they are called literary ghouls.

The book before us—the third volume in the series of Simpson's works—embraces clinical lectures on a numerous list of topics. Evidently suited for oral delivery, and many of them needing sorely the revision which he might have given them, they still form an invaluable book for the busy practitioner, if only from the multiplicity of methods of treatment suggested, and from the spirit of careful experiment which runs as a thread through them all.

There are in this volume lectures on Diagnosis of Diseases of Women, Vesico-vaginal Fistula, Cancer,—wherein are set forth fully the various caustics, their method of application, and their relative value, by one who has thoroughly tried them himself,—the very full and valuable lectures on Ovarian Dropsy and Ovariectomy, the History of the Cranioclast, Displacement of the Uterus, and the Use of Pessaries, besides many more: in fact, their number is so great that more than a mention is impossible in our allotted space; but almost all are well worth careful reading and study, each forming as it were a complete monograph of the knowledge of the given topic existing at the time of their delivery.

But there is very little attempt made by author or editor to give any one else credit for anything: we are left under the general impression that Simpson invented everything mentioned in the text, and designed all the pictures,—except those which we recognize as old and familiar friends. This total want of reference except where it could not well be avoided is the great defect of the book: it destroys half its usefulness; for in a technical work foot-notes are never obtrusive, and to those who need them they are priceless.

A PRACTICAL TREATISE ON THE DISEASES OF WOMEN. By T. GAILLARD THOMAS, M.D., Professor of Obstetrics and Diseases of Women and Children in the College of Physicians and Surgeons, New York, etc. 8vo, pp. 784. Philadelphia, Henry C. Lea, 1872.

The names of American surgeons have been prominently connected with the progress which gynecology has made

during the past fifteen years; but while Sims, Bozeman, Emmet, and Atlee have recorded the results of their experience in valuable monographs on special subjects, no work has appeared which gave a comprehensive survey of the treatment of the diseases of women. To supply this want, to unite the "disjuncta membra," and systematically to review the whole subject, is the object of Prof. Thomas' treatise. Its appearance was eagerly awaited on both sides of the Atlantic, for he seemed eminently fitted to perform the task, both on account of his connection with large hospitals, and from the fact that his name has been intimately associated with original investigations in this field. Numerous additions and alterations have been made in this the third edition, amounting in fact to one-fourth of the present volume; nor have these alterations been unimportant, for the author, keenly alive to the fact that there is no branch of medicine in which greater activity has been shown, has conscientiously incorporated the results of recent investigations both in Germany and England.

In his preface, Dr. Thomas calls especial attention to the new term which he seeks to introduce into uterine pathology,—viz., "areolar hyperplasia,"—which he suggests as a substitute for the already numerous synonyms by which that state of chronic enlargement of the uterus, with which—call it as you will—every gynecologist is familiar, has long been known. Indeed, throughout his whole work he manifests a disposition to create new terms,—to divide and subdivide,—forgetful that it is only in the infancy of science that each individual fact and condition must be labelled and ticketed. An observer of large scope and synthetic mind recognizes these special conditions to be but successive steps in one and the same process, the one inevitably resulting from the other if the original cause remains in action and includes the whole series in one comprehensive term. Looked at in this light, how much that is labored and artificial in uterine pathology falls to the ground! We have only to apply to the uterus our general knowledge of pathological processes as they exist in other organs, to find them producing the same results, modified, it is true, here as elsewhere, by its anatomical and physiological characteristics. Catarrhal inflammation of the mucous membrane of the uterus excites growth and proliferation of the sublying cellular elements, just as a similar condition of the mucous membrane of the intestine produces hypertrophy of its muscular tissue. This increased growth, affecting mainly the interstitial tissue of the uterus, results, as in other organs, in a subsequent condition of cirrhosis. That the periodic engorgements, the frequency of "insults,"—to use Virchow's expression,—the cycle of rapid development and involution which pregnancy involves, should furnish the most favorable conditions for the continuance of any perverted action when once established, is readily understood and granted; but the process is the same, and is included under the same comprehensive laws which govern other organized tissues. Knowledge is not advanced by slavish adherence to old-time definitions of inflammations, or by clever avoidance of words already in use by the coinage of a new and ambiguous paraphrase:

"Denn eben wo Begriffe fehlen,
Da stellt ein Wort zur rechten Zeit sich ein."

Nay, more. If the phrase "chronic metritis" should be given up, would we gain anything by substituting the term "areolar hyperplasia"? The use of the word *areolar* as describing a definite tissue has been abandoned even in our college text-books, last of all to accept an innovation; while it is unquestionably true that the muscular elements also, to a certain extent, increase and multiply.

The mistake of separating and the futility of attempting to diagnose "chronic cervical endometritis" from "chronic corporeal endometritis" has already been pointed out by other reviewers; and we would only warn the enthusiastic student of this book against attempting to establish a diagnosis by "causing the sound to impinge against the sides of the cavity of the fundus," when, if the body is affected, "pain will be felt which may last, like a toothache, for half an hour, while the withdrawal from the cavity will be followed by a few drops of blood with mucus." If inflammation does not already exist, these efforts at "differentiation" will probably be followed by eventual success. In fact, Prof. Thomas himself, with admirable candor, calls attention to the fact that

"injuries from sounds act so evidently in exciting inflammation as to need only mention,"—an axiom correct in pathology, however awkwardly expressed.

In the chapter on Uterine Displacements, the author, fully recognizing the importance of clearly understanding the normal position of the uterus, quotes, first of all, Meadows' statistics, which show that posterior displacements of the uterus greatly preponderate; then Nonat's observations, to prove the overwhelming frequency of anterior displacements; and, lastly, to clear away any confusion which may have arisen in the mind of the reader, a *garbled and inaccurate* translation of Corde's admirable paper on "The Normal Position of the Uterus." The illustrations of the various kinds of pessaries which adorn this portion of the work are numerous and attractive, including two original instruments of the author, by which the uterus is securely held in its unknown "normal position."

The chapter on Cancer and Epithelioma is too hopelessly confused for us to attempt criticism. We would only call attention to one point, where, in speaking of cancer of the body of the uterus, the author has been unintentionally interesting. Some years ago, Paget described, under the title of "Recurrent Fibroid Tumors of the Uterus," a growth which, while it resembles the ordinary fibroid tumor in its general appearance, differs from it markedly in its tendency to recur. Other tumors have also been described, which, on account of their great resemblance to medullary cancer, and their malignant character, have been classed among the cancerous growths. Moreover, in the literature on the subject there exist here and there descriptions of the so-called cancer of the body of the uterus. Gusserow first recognized the fact that these growths were all sarcomatous tumors of the uterus, and instigated further inquiry on this subject. Since that time, Hegar, in an able paper, has thrown much light on the hitherto obscure pathology of these tumors, and shows that there exist two forms of sarcomatous tumors of the uterus, in one of which the mucous membrane is the seat of a diffuse infiltration with sarcomatous elements, forming a friable mass, which gradually fills up the cavity of the uterus, and may project through the os uteri; or the tumor may be more or less circumscribed, resembling in its seat and appearance the intramural fibroid tumors. The character of these tumors is essentially malignant, always recurring after removal, and eventually causing the death of the patient. One of the most important points in the diagnosis and prognosis is the *slowness* of the fatal issue compared with that of the true carcinomatous tumors of the cervix, or the far more common form, the cancer, affecting the same portion of the organ,—a fact which Dr. Thomas has himself noticed in the cases which he describes—erroneously, we think—under the title of "Cancer of the Body of the Uterus." A microscopical examination is the only sure and easy way by which a diagnosis can be made. Space fails us to develop further the details of this interesting subject.

If we have ventured to criticise certain passages in Dr. Thomas' book, it is only to make more emphatic the assertion that, regarded as a whole, there is no book on the diseases of women in which the student will find the subject presented in so practical and useful a form. The arrangement of Dr. Grailey Hewitt's book is such as to render the most tedious repetition inevitable, and to disqualify it for use as a text-book; but in the work under consideration each subject is for the most part treated clearly and succinctly, the one topic naturally introducing the other.

HISTORICAL AND BIOGRAPHICAL MEMOIRS, ESSAYS, ADDRESSES, ETC., written at Various Times during the Last Fifty Years, and now First Published in their Collected Form. By GEORGE B. WOOD, M.D., LL.D., Emeritus Professor of the Practice of Medicine in the University of Pennsylvania. 8vo, pp. 576. Philadelphia, J. B. Lippincott & Co., 1872.

To the man retiring from the active duties of life we believe there ever comes the task of calmly reviewing his past career, and, should he have been an author, of so fashioning and so completing his works as he would wish them to be remembered.

This volume is a result of the performance of such a duty by Dr. Wood, and "consists of various productions of the

author, written at different periods of his life, from early manhood to the present year. The greater number of them have already appeared in print; having been published either in the Proceedings of the Societies to which they were communicated, or, in an isolated form, by the different bodies by whose appointment, or at whose request, they were prepared. A few of them have never heretofore been printed," etc.; but all are papers to which the doctor "felt desirous of affording a better chance of durable existence than they would probably have in their present scattered and isolated state, and, at the same time, a better opportunity for whatever useful influence they may be calculated to exert;" and he "resolved to give them the consolidated form in which they are now offered to the public." Arranged under—I. Historical Memoirs; II. Biographical Memoirs; III. Essays, Addresses, etc., they are presented more especially to non-medical readers, who will find facts not generally known,—the result of laborious research,—and given in a manner going to show that the author, had he chosen history, would have excelled in that branch of literature.

We invite our readers to a brief notice of an Historical Memoir of the University of Pennsylvania, from its origin to the year 1827. At the time of its republication, however, foot-notes were added, so that we have an almost continuous narrative to the year 1834. We select the following facts. In 1689, only seven years after the foundation of Philadelphia, a public school was started, which received its final charter in 1711 from William Penn, and was given in charge of "fifteen discreet and religious persons, of the people called Quakers." For more than sixty years this continued to be the only public place of instruction in the Province. Franklin drew attention to this, and in 1743 drew up the plan of an academy; but it was not until 1749 that the rules of organization were signed by the trustees. In the Academy were taught Latin, English, and Mathematics; and a Charity School for both sexes was opened, in which the children of poor citizens were instructed gratis, their number being seldom short of one hundred. In 1753 a charter was obtained, and, the school continuing prosperous, an additional charter was granted, in which the Board was changed into that of "The Trustees of the College, Academy, and Charitable School of Philadelphia," with the condition annexed (afterwards the source of much trouble) that the trustees and professors, before entering on the performance of their offices, should respectively take and subscribe the customary oaths or affirmations of allegiance to the King of Great Britain. The first commencement of the College took place on the 17th of May, 1757, when seven young men received its honors. Of the Medical Department, we read that the 3d of May, 1765, was the birthday in America of a system of medical education, as Dr. John Morgan was appointed Professor of the Theory and Practice of Physic; and that the first medical commencement was held on the 21st of June, 1768, when ten gentlemen received their Bachelor's degree. A most interesting chapter is devoted to the finances of the College, as we find that, besides the various benefactions, etc., the sermons of the celebrated Whitefield, as well as lotteries, were most productive. But the troubles of the Revolutionary war sadly impeded the success, at this period, of the institution; for the income, as well as the receipts, fell so low that a pretext was afforded the legislature to interfere in its concerns. The schools were indeed closed in June, 1777, and, although reopened the following year, violent political excitement prevailed, and the charter was abrogated by the legislature of Pennsylvania, which from that time took the College into favor, conferring upon it the new and more lofty title of University of Pennsylvania. In the spring of 1802 the schools were removed to the buildings on Ninth Street. In chapter xiv. will be found an account of the several departments for the year 1827, where we lay down the book with a sincere regret that, by reason of failing energies, Dr. Wood felt compelled to relinquish an evident design of bringing his narrative down to the present times, which are so likely to constitute an important era in the history of the school. Still, Joseph Carson, M.D., now Professor of Materia Medica and Pharmacy in the University, has given us a History of the Medical Department; and we feel assured that an able chronicler of the Department of Arts will arise, who, taking up the record, will also be duly grateful for so faithful a research by Dr. Wood.

The second historical memoir is devoted to a History of the Pennsylvania Hospital; being an address delivered June 10, 1851, on the occasion of the centennial celebration of the founding of the hospital.

BOOKS AND PAMPHLETS RECEIVED.

A Year-Book of Therapeutics, Pharmacy, and Allied Sciences. Edited by Horatio C. Wood, Jr., M.D., Professor of Medical Botany, University of Pennsylvania. 8vo, pp. 360. New York, William Wood & Co., 1872.

GLEANINGS FROM OUR EXCHANGES.

DEXTRAL PRE-EMINENCE.—Dr. William Ogle contributes to the last volume of the *Medico-Chirurgical Transactions* a valuable paper on this subject. The following abstract is taken from *The American Journal of the Medical Sciences* for July:

"After briefly reviewing the literature of the subject, Dr. Ogle gives his reasons for believing that right-handedness depends on some predominance of the left brain, and left-handedness, when it occurs, on a transposition of this structural peculiarity, whatever it may be. If the two hemispheres be compared, the left will be found a little larger, and in the frontal lobes especially the left convolutions will be observed to be much more complicated. In the few instances in which he has had the opportunity of examining the brains of left-handed persons, the reverse of this has been found to be the case. The brains of monkeys possess the same peculiarities, and Dr. Ogle has satisfied himself, by careful observation at the London Zoological Gardens, that the majority of monkeys are right-handed, and that a very small proportion (only three out of twenty-three) are left-handed. The parrot, too, will use its right leg to support itself in preference to its left. Thus, of eighty-six parrots, sixty-three invariably supported themselves on the right leg, while the remaining twenty-three as invariably perched on the left one.

"It might be objected to Dr. Ogle's view, that the greater development of the left brain may be the consequence of the increased use of the right side, and not its cause. But this disparity between the two hemispheres exists in foetal life, and Gratiolet has asserted that the convolution of the left frontal lobe appears earlier than the corresponding convolution of the right. Besides which, it is clear that some anatomical difference between the two sides must precede the right-handedness; and this difference must be somewhere in the brain, for the author shows very conclusively, in the first part of his paper, that it cannot be referred to a conventional agreement made between the members of a community, and handed down by educational influence from parent to child through successive generations. In a former paper he has expressed an opinion that the cause of the greater development of the left hemisphere is to be found in the difference of the blood-supply to the two sides of the brain; and to this opinion he is disposed to adhere. He has found that the arteries which convey blood to the brain are, as a rule, somewhat larger on the left side than on the right, and that this rule apparently breaks down in the case of left-handed men. This increased size of the arteries of the left side, he thinks, cannot be regarded as a consequence of the increased use of the hemisphere to which they go, since the left vertebral artery is generally larger than the right; and yet, from their uniting to form the basilar artery, they must be precisely alike so far as the *vis a fronte* goes. The course of the left carotid artery is, moreover, much less tortuous than that of the right; and this will, of course, secure a more liberal supply of blood to the corresponding hemisphere. In monkeys which have been shown to be the subjects of dextral pre-eminence, the arterial branchings appear to accord with those of man. 'But in parrots,' he says, 'I find a striking corroboration of my hypothesis. In these birds there is very great variability in the arrangement of the right and left carotid arteries. In some few the two are of equal size; but this is the exception. In the great majority the arteries are unequal; and when this is the case, it is invariably

the left carotid which is the larger, as Meckel, years ago, pointed out. Sometimes, indeed, it would appear that the right carotid is rudimentary, or even entirely absent, and that the brain receives its whole blood-supply from the vessels on the left. It is difficult to suppose that this is a mere coincidence; but, if it be anything more, it renders the explanation I have advanced in the highest degree probable.'

"In favor of Dr. Ogle's view is the fact that in left-handed people paralysis of the left side is accompanied by loss of speech, which may be regarded as an indication that the left side of the brain is more developed in their bodies than the right."

THE CONNECTION BETWEEN PULMONARY HEMORRHAGE AND PHTHISIS.—In a valuable paper contributed by Dr. Julius Sommerbrodt, of Breslau, to the June number of *Virchow's Archives*, the question whether the extravasation of blood into the air-cells of the lungs is ever the cause of consumption is very fully discussed. Numerous experiments were made by injecting blood taken from their own bodies into the tracheæ of dogs, the animals being killed at periods of time varying from one hour to twelve days after the operation. In those soonest killed the blood was found to have penetrated into different parts of the lungs, but was accumulated in greatest quantity near their roots. At the end of the first day the injected patch could be readily distinguished from the other portions of the lung by a well-defined difference in color, which, however, became fainter on the third day, and generally ceased to exist on the eighth day. In no case were fibrinous coagula found obstructing the bronchial tubes. In dogs killed in from two to three hours after the experiment, the microscope showed the presence in the alveoli, containing blood, of some pale cells, two or three times as large as the blood-corpuscles, and having a nucleus and opaque somewhat granular contents. Twenty-four hours later, these cells, which varied in size from 0.006 to 0.015 mm., had become more numerous; their nucleus was less distinct, and their contents were more opaque. The cells continued to increase in number until the fifth day, when they also attained their maximum size (0.021 to 0.024 mm.). Occasionally Dr. Sommerbrodt has discovered within them corpuscular elements, which he has no doubt are blood-corpuscles, not only because they resemble the corpuscles, lying free in the alveoli, but also because they are not stained by carmine as are the nucleus and nucleolus. He thinks, therefore, that they have penetrated into these cells. In animals killed after the seventh day, the cells were found to have become less round, to have a tendency to become crenated and more opaque, and to decrease in numbers. Dr. Sommerbrodt has no doubt that these cells take their origin from the walls of the alveoli, and has been able not only to trace the gradations from the healthy cell to those just described, but also to detect the points from which they have been thrown off. These appearances he attributes to catarrhal pneumonia, and he therefore asserts that blood is capable of exciting this form of inflammation; but, having never been able to discover thrombi in the minute bronchial tubes, he rejects the explanation of Niemeyer, believing that blood exercises a directly irritating effect upon the alveoli.

Even in the bodies of dogs who were allowed to live the longest there were no appearances of phthisis; and the experimenter calls attention to the fact that none but healthy animals were used, and that in man hemorrhage from the lungs is not always followed by serious results. It is only in those who are predisposed to phthisis, or who are debilitated from any cause, that this is to be dreaded; for the products of the catarrhal pneumonia excited in them are very apt to undergo caseous degeneration.

THE INFLUENCE OF PHOSPHORUS UPON THE ORGANISM.—Dr. George Wegner has for some time past been studying the effects of phosphorus upon the organism, and in the last number of *Virchow's Archives* gives the results of his investigations. He has found that, in cases of acute poisoning by phosphorus, the walls of the minute arteries and veins undergo fatty degeneration, as well as the heart, liver, and other organs. This circumstance renders it easy to understand the occurrence of extravasation of blood into the tissues, and, if the patient be menstruating at the time, the excessive flow of blood from the uterus. To determine what were its effects upon the

system, various animals, such as dogs, cats, rabbits, and chickens, were submitted to its influence in various ways. To some it was given by the mouth; others were obliged to inhale its fumes constantly. He has come to the conclusion that it is capable of producing an irritation of the digestive apparatus, and of exciting an increased growth, especially in thickness, of the bones. Very minute doses appear to cause no derangement of the functions of the stomach. Pushed a little further, however, it gives rise to inflammation, ulceration, and, finally, in consequence of an increased growth of connective tissue, to thickening and induration of the mucous membrane. A similar hyperplasia of the connective tissue of the liver, together with some fatty degeneration of its cells, is observed.

The same disease of the jaw, as in man, occurs in a certain number of animals exposed to the vapors of phosphorus; but inasmuch as this has never been seen in animals to which the poison was administered only internally, and since it always takes place in those in which the operation of excising a portion of the mucous membrane covering the jaw has been performed, and will be produced in any part of the body where the periosteum has been laid bare and exposed to these vapors, Dr. Wegner is inclined to look upon it as a direct rather than a constitutional effect upon the periosteum, giving rise to periostitis, the deposit of bone, and, in severe cases, caries, and to infiltration of the surrounding tissues. The tendency to increased growth of the bones is, on the contrary, a systemic effect. The growth is principally in thickness, and takes place at the expense of the medullary canal of the long bones, as well as of that of the Haversian canals; and this is produced by doses which do not give rise to irritation of the stomach and bowels. The new bone has been analyzed, and found not to differ materially in chemical composition from the bone of healthy animals.

In regard to the therapeutic uses of phosphorus, Dr. Wegner thinks it indicated in the treatment of osteomalacia, rachitis, ununited fractures, resections, and in transplantations of the periosteum, and takes occasion to remark that it will be found to have, like many other substances which are used as poisons, different effects in different doses.

CAUSE OF UTERINE MOVEMENTS.—A short paper of considerable interest to gynecologists, by Drs. Aser and Schlesinger, appeared in No. 52 of the *Centralblatt* for 1871 (*The British Medical Journal*, June 22, 1872). From numerous experiments, chiefly made on pregnant rabbits, in which the uterus was generally at rest when they began their observations, they discovered that whenever the blood which circulated through the brain or through the uterus itself became extremely venous, tetanic contraction of the uterus took place. As is well known, the blood which is contained in the vessels of any part of the body may be rendered venous in several ways. It may be done by stopping the respiration, so that fresh air is prevented from reaching the blood in the lungs, in which case the blood becomes venous throughout the whole body. Or the same effect may be produced by arresting the circulation in a part by tying either the arteries going to it, or the veins returning from it, when the blood stagnates in the vessels, and becomes completely venous; so that this part of the body is, as it were, suffocated, while the rest of the body is well supplied with arterial blood. A third way of producing this condition is by bleeding profusely, so that too little blood is left in the body to keep up the circulation. Accordingly, the authors found that when respiration was stopped in curarized rabbits violent contractions occurred in from ten to thirty seconds afterwards. This was due to the venous blood irritating the brain; and the same effect could be produced by cutting off its supply of blood through ligation of the innominate and the left carotid and subclavian arteries. Bleeding the animal nearly to death acted still more rapidly, and produced tetanic contractions of the uterus in between five and fifteen seconds. The irritation of the brain which produced uterine contractions was conducted down the spinal cord to the uterus, and when the cord was divided irritation of the brain in any of the ways just mentioned produced no effect. Stagnation of the blood in the uterus, produced by compression of the aorta, caused uterine movements of the same tetanic character, but which did not begin till the compression had been kept up from seventy to one hundred seconds, and were occa-

sionally rather weaker than those which originated in irritation of the brain. If spontaneous movements of the uterus were present, they soon ceased after compression of the aorta was begun; and when the arterial blood was again allowed to circulate through the organ by removing the compression, a strong contraction of the entire uterus, quickly followed by rest, took place.

THE ACTION OF PEPSIN ON BLOOD-FIBRIN.—Dr. V. Willich contributes a long paper to Pflüger's *Archiv* (*The Lancet*, May 25, 1872) on the ferments effecting the digestion of fibrin. The digestive fluid he employed was the fresh glycerine extract of the minced mucous membrane of the stomach of the pig. The fibrin was obtained from fresh blood. This was macerated in a solution of hydrochloric acid, containing 0.2 per cent. From the results of his experiments it appears that fibrin absorbs pepsin very energetically; that the process of digestion commences with the formation of a feeble chemical combination between the pepsin and the acid, and that this compound is the really active substance. In regard to temperature, digestion proceeds slowly, even at 40° Fahr., but with the greatest rapidity and energy at temperatures between 95° and 112° Fahr. Higher temperatures than this retarded or altogether prevented the action. For the digestion of a certain quantity of fibrin, definite quantities both of acid and of pepsin are requisite. Meissner's parapeptones and metapeptones are initiatory stages of the action of pepsin on fibrin, and, if the action proceeds, are converted into peptone; but if the amount of pepsin be insufficient, they may remain unaltered.

THE TREATMENT OF INTERMITTENT FEVER BY SMALL DOSES OF IPECACUANHA.—Udhoy Chand Dutt, the civil medical officer at Noakhally, reports, in *The Indian Medical Gazette* for June, the results of the treatment in seventy-six cases of intermittent fever by small doses of ipecac. In seventy-four cases a cure was effected by it alone, and in two instances only it failed, rendering necessary the subsequent administration of quinia. He says, "I commenced the treatment with a dose of opening medicine,—castor oil or kaladana,—and then administered ipecacuanha wine 1 drop, or ℥ ½, or the powder, gr. ʒo, every two hours, for six doses, during the day. If the fever is strong and the patient weakly, rum and ammonia mixture is given during the exacerbation, otherwise no medicine is prescribed for the hot stage; but ipecacuanha is given throughout, irrespective of the stages. Thus administered, it gradually reduces the strength and duration of the paroxysms, and cures the disease in from three to five days." He is satisfied that the antiperiodic powers of ipecac must be ranked as second only to those of quinia.

FIBROUS ENLARGEMENT OF THE UTERUS SUCCESSFULLY TREATED BY ERGOT.—Dr. Brunton reports a case of this kind to the London Obstetrical Society (*The American Journal of the Medical Sciences*, July). The patient was a single woman of 47. The uterus when first examined reached to a point midway between the pubes and umbilicus. The menses were excessive, and recurred every two weeks. She was treated with the bromide of potassium and with the external application of iodine, but with no benefit. She afterwards took digitalis, morphia, cannabis indica, and ergot. The hemorrhage becoming alarming, and the uterus reaching as high as the umbilicus, the ergot was administered in large doses, as much as from one to two ounces being given at each period, with controlling effect. The uterus began to diminish in size under this treatment, and in six or seven months could not be felt above the pelvis, and no enlargement could be detected when it was examined through the rectum. She is reported to have taken from forty to fifty ounces of ergot in six months. At last report the catamenia were still frequent and excessive, but under control by ergot and morphia.

VERATRIA AS A PARASITICIDE.—Dr. Eugène Peugnet recommends, in *The American Journal of Syphilography and Dermatology* for July, the application of the following lotion in cases of tinea versicolor, favus, and aspergillus: R—Veratriæ (sabadillæ), gr. iij; acidi acet. dil., ℥ x; aq. rosæ, glycerinæ, aa ʒss. M. The tinctures of veratrum viride and veratrum album also possess parasiticide properties.

COLD ALCOHOLIC TEST FOR ALBUMEN.—Dr. C. R. Drysdale reports from the Metropolitan Free Hospital (*The Boston Medical and Surgical Journal*, June 27; from *The Medical Press and Circular*) that he has tried the cold alcohol test for albumen recommended by Dr. Betz (*Memorabilien*, 1872), and that it has proved trustworthy in the cases tried by him. Dr. Betz remarks that boiling the urine is not always a sufficient plan when examinations are made in private practice, because albumen is not always thrown down by boiling. Also nitric acid is not certain in all cases. He mentions that a trustworthy and very easily obtained reagent is ordinary spirit as bought in shops. A portion of the urine is poured into a glass, and over it about an equal quantity of spirit, without allowing the two liquids to mingle. When albumen is present, the alcohol has a milky haze at the junction, and occasionally there are small nipples of albumen seen in the alcohol when the urine is very full of it. This process is so simple that it can always be made use of. According to Dr. Betz, this test will frequently show albumen when we are not inclined to think it exists on account of the absence of œdema, heaviness of the body (which is seen in children), foaming of the urine on micturition, scarlatina, or pneumonia. Dr. Drysdale has found the reaction in four cases of chronic albuminuria now under his care at the hospital.

TREATMENT OF ULCERS OF THE LEG.—Mr. W. E. C. Nourse, of Brighton, reports, in *The British Medical Journal* for June 29, that he has treated nearly five hundred cases of ulcerated legs during the last thirteen years, and that the results of his treatment have been neither unsatisfactory nor disheartening, having met with only ten or fifteen failures out of the whole number. The plan of treatment has been the application of uniform pressure with strapping, bandages, etc.; the sparing use of ointments or lotions, of stimulants to the ulcers, and of internal medicines, and the unsparing use of pains and trouble to do the work properly; the non-disturbance of the healing process by frequent dressings, the wounds being only uncovered once, or at most twice, a week; the recognition of a low vitality as a common cause in most of these cases, involving more or less destruction of tissues; and the consequent strict avoidance of mercury, strong or frequent cathartics, and all forms of depressing medicines, and the allowing to the patient his ordinary diet and mode of living, cutting off only whatever seemed excessive or positively injurious, and the removal from the limb of all ligatures, or anything likely to obstruct the circulation, also of irritant or injurious applications.

CEREBRAL DISEASE OF SYPHILITIC ORIGIN.—Dr. G. Owen Rees (*Guy's Hospital Reports*, vol. xvii.; from *The American Journal of the Medical Sciences*, July, 1872) thinks that cerebral disease of syphilitic origin may generally be recognized, even when the possibility of infection is denied by the patient, by attention to the following points: The paralytic seizure, when dependent upon syphilis, is generally the immediate result of some violent exertion, or of some long-continued muscular effort carried on to fatigue, and the collapse is often so great as to threaten immediate dissolution. The hemiplegic and paraplegic symptoms are peculiar in character, there being marked irregularity in loss of motor power, and of sensation as affecting opposite sides of the body. Pain in the head and tenderness of the scalp are scarcely ever wanting. Aphonia has been observed in many cases in the early stage. Whenever these symptoms are presented by a patient, the writer of the paper thinks a course of mercurial treatment should be at once begun.

TYROSIN IN THE SPUTA.—Professor Leyden (*Virchow's Archives*, June 13) found crystals of tyrosin in the sputa of a patient with chronic bronchitis, and probably dilatation of the bronchi. In this case he thinks it probable that the albuminous constituents of the secretion, instead of undergoing a usual form of decomposition, had become converted into tyrosin.

RETARDATION OF THE MOTOR IMPULSE.—In two cases reported in *Virchow's Archives*, June 13, Professor Leyden, of Königsberg, thought, from a consideration of the other symptoms, that the retardation of the motor impulse, which was considerable, depended upon disease of the pons or of the medulla oblongata.

EFFECTS OF THE CIRCULATION IN THE LUNGS IN DISTENDING THE AIR-VESICLES.—In the Gulstonian Lectures delivered by Dr. Hensley (*The British Medical Journal*, June 22), he advanced the hypothesis that one cause of the alteration of the air-vesicles from a state of collapse in the lungs of the fœtus to a state of distention in the lungs of the newly-born child, was that the blood, forcibly propelled by the heart through the capillaries of the lungs, tended to straighten them out, and thus to open out the air-vesicles round which they are placed, and which, in the fœtal condition, are folded up like the petals of an unopened flower-bud. The effect of the circulation in doing this has actually been investigated by Liebermann (*Wien. Med. Zeit.*, No. 5, 1872), who constructed an apparatus to imitate the air-vesicles by placing one ox-bladder within another and then sewing them together in such a manner as to leave a network of tubes which represented the pulmonary capillaries, and which terminated in two openings, in which tubes corresponding to the pulmonary artery and vein were placed. The tube corresponding to the pulmonary artery was connected with another bladder filled with oil which represented the heart; and the inner bladder was tied on to a glass tube which represented the trachea. The bladder which represented the air-vesicle was then placed so as to empty them of air; and, when in a collapsed condition, the one filled with oil was squeezed so as to force the oil into the network of tubular spaces left by the rows of stitches. After a squeeze or two, these schematic capillaries became full; and at the same time the collapsed walls of the bladders opened out, and air rushed in through the glass trachea to fill up the interior, with a distinct murmur. Liebermann thinks that this action of the capillaries counteracts the strongest expiratory efforts, and is the reason why the lungs contain air during the deepest expiration.

CALABAR BEAN IN TETANUS.—At a meeting of the Société de Biologie in Paris (*The British Medical Journal*, June 22), M. Laborde referred to a case of tetanus in which he had given Calabar bean, and where extreme contraction of the pupils was produced. A gramme of the extract had been given. M. Leven called attention to the fact that toxic symptoms had been produced in several instances where Calabar bean had been given for the treatment of tetanus. There did not appear, he said, to be a single case of recovery from traumatic tetanus under the use of eserine,—the active principle of the Calabar bean. Recovery from spontaneous tetanus, on the other hand, frequently took place under any treatment.

THE INFLUENCE OF PRESSURE ON FERMENTATION.—Mr. H. T. Brown (*The Academy*, June) has found that during alcoholic fermentation other gases besides carbonic anhydride are invariably given off. When malt ferments, he finds the gas unabsorbed by potash to be about $\frac{1}{3000}$ of the total gas evolved. When fermentation takes place under reduced atmospheric pressure, the proportion of evolved gas not absorbed by potash is found to be considerably augmented, the increase being mainly due to hydrogen; and the oxidation products, acetic acid and aldehyde, are likewise more abundant in the fermented liquid. The author considers that water is decomposed during fermentation, dissociation of the water-molecules being favored by decrease of atmospheric pressure.

VACCINATION AS A CURE FOR SMALLPOX.—Dr. Grieve, of the Hampstead Smallpox Hospital (*The Boston Medical and Surgical Journal*, July 4), has put the curative power of vaccine lymph to the test in the way recommended by Mr. Furley, viz., by injecting large quantities under the skin. Seven cases were treated in this manner. The results were not at all satisfactory. Two men suffered severely from the local effects of the hypodermic injection of lymph, and the treatment employed did not produce the least ameliorating effect on the disease in any of the cases. One of them, in fact, died of malignant smallpox.

PREDICTION OF THE SEX OF THE CHILD IN UTERO.—Dr. T. J. Hutton says (*New York Medical Journal*, July) that when the fœtal pulsations number 144 per minute, the child is a female; when 124, it is a male. He gives the record of seven cases, the only ones in which he has had the opportunity of testing this rule, and in which it was the sole guide. The prediction in every instance proved to be correct.

MISCELLANY.

PHILADELPHIA PHYSICIANS ABROAD.—The following distinguished ophthalmologists have gone from this city to England to attend the ophthalmological congress: Drs. E. Dyer, William F. Norris, and William Thomson. In addition to these, Drs. J. M. DaCosta, S. D. Gross, D. Hayes Agnew, Francis W. Lewis, O. A. Judson, James Tyson, and Charles T. Hunter are spending the summer in Europe, either in travel or in study.

HABITUAL DRUNKARDS.—*The British Medical Journal* for June 29 contains the report of the select committee of the English House of Commons appointed to inquire into the best plan for the control and management of habitual drunkards, from which we make the following extracts:

"In view of the absolute inadequacy of existing laws to check drunkenness, whether casual or constant, and in view of the fact that drunkenness is the prolific parent of crime, disease, and poverty, the committee recommend 'that sanatoria, or reformatories for those who, notwithstanding the plainest considerations of health, interest, and duty, are given over to habits of intemperance so as to render them unable to control themselves, and incapable of managing their own affairs, or such as to render them in any way dangerous to themselves or others, should be provided. These should be divided into classes A and B: A for those who are able, out of their own resources or out of those of their relations, to pay for the cost of their residence therein. These, whether promoted by private enterprise or by associations, can be profitably and successfully conducted. B, for those who are unable to contribute, or only partially. These must be established by state or local authorities, and at first at their cost; though there is good reason to believe that they can be made wholly or partially self-supporting.

"The admission to these institutions should be either voluntary or by committal. In either case, the persons entering should not be allowed to leave, except under conditions to be laid down; and the power to prevent their leaving should be by law conferred on the manager.

"The patients should be admitted either by their own act, or on application of their friends or relatives, under proper legal restrictions; or by the decision of a local court of inquiry, whenever proof shall be given that the party cited is unable to control himself, and incapable of managing his affairs, or that his habits are such as to render him dangerous to himself or others."

The committee further recommend that the fine for drunkenness, for the first or second offence (when it is most desirable to prevent the formation of the habit) should not exceed forty shillings, or, in default thereof, imprisonment for a period not exceeding thirty days. "It is in evidence," the committee say, "as well from those who have conducted and are still conducting reformatories for inebriates in Great Britain, as by those who are managers of similar institutions in America, that 'sanatoria,' or inebriate reformatories, are producing considerable good in effecting amendment and cures in those who have been treated in them." The average number of cures is stated to be from thirty-three to forty per cent. of the admissions,—this percentage being based upon subsequent inquiry, from which the cures appear to be as complete and permanent as in any other form of disease, mental or physical. The average time occupied in effecting these cures is stated at from

twelve to sixteen weeks in America. For the English institutions the period has been longer. That the proportion of cures is not larger is attributed by all the witnesses to a lack of power to induce or compel the patient to submit to treatment for a longer period; and that power is asked for by every one who has had, or still has, charge of these institutions.

RINGING THE DOCTOR'S BELL.—*The Medical Times and Gazette* of June 8 says, "Some time since, we published the case of a boy whose tooth had been extracted by a surgeon who had been annoyed by the young scapegrace pulling his bell as 'a lark.' An action was brought against the surgeon, and he had to pay damages. We have now to record a case somewhat similar, and in which the doctor was again made defendant in an action. At Burnley, last week, Dr. Dean, a member of the Town Council, and in large practice, was charged with unlawfully, maliciously, and feloniously applying a certain corrosive to the forehead of Louis Calverly, with intent to disfigure, etc. It appeared in evidence that about a fortnight since the boy went to the doctor's house to examine the bell-handle, which is in the shape of a closed fist. The bell rang; the defendant came out. He took the boy into the surgery, and wrote the word 'Bell' on his forehead with caustic. The legal advisers on either side had a long consultation, the result of which was the withdrawal of the summons on the defendant making an apology and paying costs. Undoubtedly in the two cases the defendants went far beyond the mark in the punishment they inflicted; but we believe no magistrate would convict a surgeon of an offence if he gave the runaway ringer a good horsewhipping. However, all things considered, we advise our brethren on no occasion to take the law into their own hands. Magistrates deal sharply with the silly and offensive people who ring doctors' bells for amusement. Only last week, Mr. May, an undergraduate of Trinity College, Cambridge, was charged at the police-court with ringing Dr. Ransome's bell in Jesus-lane, and, notwithstanding an offer to apologize and a good character from his college tutor, he was fined 40s. and costs."

HOW HOMŒOPATHIC CONVERTS ARE MADE.—The following amusing account of a conversion to homœopathy is taken from *The Boston Medical and Surgical Journal* of July 4:

"Prof. Henderson, of Edinburgh, avowedly one of the leaders of homœopathy in Scotland, and before his adoption of the new practice a physician to the Edinburgh Infirmary and a Professor in the University, owed his medical conversion, it is said, to a curious incident. The story is attributed to the late Sir James Simpson. Dr. Henderson had been induced by Abercrombie to investigate the subject of homœopathy, and he made certain researches which he mentioned in public as having struck him. Simpson, some time before that, had received from a well-known homœopathic chemist a case containing a set of phials filled with globules, which he had never used. These, he said, he should be glad to hand over to Henderson, and the latter with pleasure accepted them. He used them, and was so struck with their effects that he declared himself convinced of the truth of the homœopathic doctrines. Unfortunately, it turned out too late that he had unwittingly deceived himself; for the case with its phials had long been a plaything for Simpson's children, who used to empty out the little globules into heaps and fill the phials from these indiscriminately. It need hardly be said that this was not known to Simpson when he gave Henderson the case; but it became known to him afterwards, and he made

Henderson aware of it. But Henderson had gone too far to recede, even if he had desired to do so, and he became a declared practitioner of homœopathy."

POST-MORTEM DELIVERY.—Under this heading *The Indian Medical Gazette* for June contains the following interesting communication:

"The *Medical Press and Circular* of April 3 contains two letters by Drs. Swayne, of Carrick-on-Shannon, and Lanigan, of Ballymahon, describing two instances of post-mortem expulsion of the fœtus through the agency of gaseous distention of abdomen. Dr. Swayne states that he 'never heard or read of a similar instance.' We suspect that the incident is not an uncommon one in Indian medico-legal practice. We can recall at least one instance of such an occurrence. The body of a pregnant woman is dispatched from a distant part of a district, and wrapped up rather loosely in a coarse cloth and bamboo matting. On arrival at the sudder station the civil surgeon finds it semi-putrid, eyes bursting, limbs widely apart, and abdomen swollen and hard as a drum. On removing the coverings, a fœtus is found between the thighs, and the uterus not unfrequently prolapsed, while the bystanders declare that when the body was started nothing of the kind was observed. Dr. J. H. Aveling gives notes in *The Lancet* of April 27 of six instances of post-mortem delivery. In five of these the delivery took place after the women had been committed to their coffins and graves. These examples are drawn from old records, but they have an air of circumstantiality and truth about them. In one instance the infant was extracted alive from the coffin. It would be very interesting and medico-legally important to find, as we have hinted is probable, that what is considered in England a curious and rare phenomenon is in India a common and familiar circumstance. In *The Indian Medical Gazette* for August, 1867, Dr. R. F. Hutchinson, then civil surgeon of Patna, has recorded a good case of post-mortem parturition which he considered unique. The medico-legal relations of effects produced by putrefaction can perhaps be better studied in India than in any other country in the world; because the conditions causing it are ever present in varying degrees, and the instances of changes of all kinds and degrees due to the influence of the heat and moisture abound. We have seen the viscera of the abdomen occupying the cavity of the thorax, into which they had been thrust through a rent in the diaphragm, of whose post-mortem causation there could be no reasonable doubt."

MAIMING ESTABLISHMENTS, it is reported, have recently been discovered by the police in London. As beggars afflicted with deformities reap a rich harvest from the compassionate public, parents are to be found who will deliberately hand over their children to be tortured for the sake of making money out of their deformities. This demand for distorted faces and twisted arms and legs has caused the establishment of this manufactory of deformities, and the proprietors, it is stated, have a curiously-graduated scale of charges. Thus, while a charge of seven dollars was made for twisting the leg of an infant under a year old, ten dollars were demanded for performing the same operation upon a child eighteen months old. This cruel and unnatural profession of child-maiming receives its principal support from misjudging persons who encourage begging by the indiscriminate giving of alms.

BURN BRAE.—On Thursday, June 27, by invitation of Dr. R. A. Given, a number of the medical men of Philadelphia visited and carefully inspected the institution known as *The*

Burn Brae, a private hospital for mental affections, situated near the West Chester Railroad, about seven miles from our city.

The guests were handsomely entertained by Dr. Given, and afterwards assembled in the beautiful grove fronting the institution. Here, true to the American fashion, they organized a meeting, by calling on Dr. Washington L. Atlee to act as Chairman, and Dr. Wm. B. Atkinson as Secretary.

After speeches by Dr. J. L. Ludlow and others, a committee was appointed, consisting of Drs. T. G. Morton, J. J. Reese, and W. W. Keen, to prepare a resolution expressive of the sense of the meeting.

The committee offered the following, which was unanimously adopted:

Resolved, That we have derived much gratification from our inspection of Burn Brae, the beautiful and commodious establishment of our friend and professional brother, Dr. Given, and we believe it to be eminently adapted to the treatment of the class of patients for which it is intended; and we do cordially recommend the institution as a most desirable residence for those suffering from mental affections.

Dr. Reese then offered the following, which was also adopted:

Resolved, That we entertain a most grateful and appreciative sense of the very elegant entertainment by our genial host, Dr. Given, and we offer him our acknowledgments for the same.

GOOD FORTUNE OF THE MASSACHUSETTS GENERAL HOSPITAL.—A few days ago the Treasurer of the Massachusetts General Hospital receipted for the large sum of \$446,000, which was paid to him as the result of a provision of the will of the late John Redman. Mr. Redman died some twenty years since, leaving a will by which the hospital was made the residuary legatee of his estate upon the death of a son who had a life-interest in it. The advance in both real and personal estate since that time has increased the value of the legacy from the \$50,000, which the trustees of the institution once expected to receive, to nearly half a million.

The late Quincy Tufts, of Boston, leaves by his will ten thousand dollars to this hospital.

PROPOSED FRENCH LAW AGAINST DRUNKENNESS.—A bill which has been laid before the members of the French National Assembly (*The Medical Record*, July 1), and has been reserved for discussion, provides:

1. Those persons found in a state of manifest drunkenness in the streets, alehouses, or other public places, shall be liable to a fine of from one to five francs.

2. Such persons as shall have undergone, in less than three years, two condemnations under the preceding clause, shall be liable to imprisonment for from six days to a month, and to a penalty of from six to three hundred francs.

3. Every person who shall have been condemned for manifest drunkenness, according to the second clause, shall be declared incapable—first, of using the franchise; second, of being elected as member; third, of being nominated for any public appointment, or exercising any public office; fourth, of bearing arms for the space of two years from the date of condemnation.

4. All electors or jurymen so appearing shall be similarly punished.

5. Keepers of cafés who allow their customers to drink to excess are to be punished.

USE OF ANTISEPTICS IN EGYPTIAN SURGERY.—A correspondent of *The Medical Times* asserts that the first instance of the use of an antiseptic as such in surgery was the case of St. Syntellectica, an Egyptian Christian lady of the second century, of whom an account is preserved in the "Lives of the Saints," and whose "day" is observed in January. This lady, whose life was devoted to the good of the poor, died of cancer of the face, which was attended with so odious a smell that she used to have the ulcer bathed with the *liquid which was used to mummify dead bodies*, in order that those about her might not suffer from it.

At a recent *levée*, Prof. Samuel D. Gross, of this city, was presented to the Prince of Wales.

PROFESSOR T. G. RICHARDSON has been transferred from the Chair of Anatomy in the University of Louisiana to that of Surgery in the same institution, made vacant by the retirement of Professor Stone; and Professor Samuel Logan, formerly of the New Orleans School of Medicine, has been appointed Professor of Anatomy.

PROF. WILLIAM WARREN GREENE, of the Bowdoin Medical College, Maine, has accepted the chair of Principles and Practice of Surgery and Clinical Surgery in the Long Island College Hospital, Brooklyn, N. Y.

DR. THOMAS H. KEARNEY has been appointed Professor of Surgery in the Miami Medical College, in the place of the late Professor Foote.

M. SÉDILLOT has been elected a member of the Academy of Sciences in Paris, in the place made vacant by the death of M. Laugier.

PROFESSORS BILLROTH and BRÜCKE, of the Vienna School of Medicine, have been offered chairs in the University of Strasbourg, but prefer to remain in Vienna.

DR. R. M. HODGES has resigned his position as Adjunct Professor of Surgery and Clinical Surgery at the Harvard Medical School.

DR. JULIUS NICOLAYSEN, of Christiania, Norway, has been appointed to the Professorship of Surgery in the University of Christiania.

OF four hundred students at the University of Zurich, eighty are ladies, a large proportion of whom are pursuing the study of medicine. Many of the ladies are of Russian birth, and have sought, in the republican seat of learning, the education which they are at present unable conveniently to obtain at home.

L'Imparziale, in briefly noticing two recent successful cases of ovariectomy in Italy,—one in the practice of Dr. Ruggi, of Bologna, and the other in that of Dr. Marzolo, of Pavia,—states that the operation has now been performed twenty times in that country, and that the number of recoveries has been five.

LARGE FEES.—Two medical witnesses from America, before the Habitual Drunkards' Committee of the English House of Commons, have received the sums of £283 13s. and £261 18s. for their expenses. The payments have been the subject of conversation in the House.

CHOLERA.—This disease continues to prevail in the North-western provinces of India. From April 15 to May 15 it was the cause of 13,144 deaths in eight districts.

THE MORTALITY FROM THE HEAT.—Another heavy death-list is reported by the Board of Health for the week ending on Saturday, July 13, at noon. A part of this mortality is undoubtedly due to the severe heat of the previous week, as the list is made up from the report of interments, and not from the actual deaths. Besides which, the debility produced by the excessive heat must have been a cause of death for several days after the temperature had slightly moderated.

Of the whole number of deaths, 525 occurred in children under five years of age, 497 in infants under two years, and 383 in infants under one year. Cholera infantum was the cause of 310 deaths, and sunstroke of 72. The number of deaths reported in New York for the same week was 1057. The diminution in the number of deaths for the week ending July 20 is very manifestly the effect of the fall in temperature.

MORTALITY FROM SMALLPOX.—The number of deaths from smallpox in Philadelphia reported for the weeks ending July 13 and 20, 1872, were respectively 15 and 6, of which 17 were of minors.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending	
	July 13.	July 20.
Consumption	39	42
Other Diseases of Respiratory Organs	21	20
Diseases of Organs of Circulation	24	12
Diseases of Brain and Nervous System	136	70
Diseases of the Digestive Organs	384	268
Diseases of the Genito-Urinary Organs	4	2
Zymotic Diseases	37	23
Cancer	8	4
Casualties	9	17
Debility	74	76
Intemperance	6	1
Murder	0	1
Old Age	29	14
Scrofula	2	1
Stillborn	17	16
Suicide	3	1
Sunstroke	71	10
Syphilis	1	0
Tetanus	0	1
Tumors	2	1
Unclassifiable	15	5
Unknown	3	2
Totals	885	587
Adults	329	172
Minors	556	415

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JULY 4, 1872, TO JULY 18, 1872, INCLUSIVE.

- SIMONS, JNO., SURGEON.—By S. O. 20, Department of the Gulf, July 5, 1872, to relieve Surgeon Randolph as Medical Director of this Department, the latter to comply with S. O. 148, c. s., War Department.
- EDWARDS, L. A., SURGEON.—By S. O. 155, War Department, A. G. O., July 6, 1872, his present leave of absence extended sixty days.
- PAGE, CHARLES, SURGEON.—By S. O. 111, Department of the Platte, July 2, 1872, assigned to duty as Post Surgeon at Fort D. A. Russell, Wyoming Territory.
- VOLLUM, E. P., SURGEON.—By S. O. 113, Department of the Platte, July 6, 1872, granted leave of absence for twenty days.
- WHITEHEAD, W. E., ASSISTANT-SURGEON.—By S. O. 117, Department of Texas, July 6, 1872, assigned to duty at Fort Brown, Texas, as Post Surgeon.
- GIRARD, A. C., ASSISTANT-SURGEON.—By S. O. 117, c. s., Department of Texas, assigned to duty as Post Surgeon at Ringgold Barracks, Texas.
- DICKSON, JOHN, ASSISTANT-SURGEON.—By S. O. 109, Department of the Platte, June 28, 1872, assigned to duty as Post Surgeon at Fort Fred. Steele, Wyoming Territory.

THURSDAY, AUGUST 15, 1872.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON ANÆMIA.

BY JAMES H. HUTCHINSON, M.D.,

Attending Physician to the Pennsylvania Hospital.

THE patient whom I have brought before you this morning has been in the hospital just three weeks, and those of you who have already seen him in the wards will be able to compare his appearance to-day with that presented by him just after his admission. During the time he has been under treatment a marked improvement in his condition has taken place. The lips, gums, and tongue, although wanting in the ruddy hue of health, do not show the corpse-like pallor which was so prominent a symptom when he first came under my care. There is also a return of color to his cheeks, and, although he has been confined to bed until within a few days, he is now sufficiently strong to walk down from the second story into this amphitheatre. He is still weak, and, as his appearance indicates, he is suffering from anæmia, or, to give the condition a more popular term, poverty of the blood. In anæmia the blood is poor in quality rather than deficient in quantity, for, even in those cases in which the condition is brought about by the rapid abstraction of blood, the blood soon regains its former volume from the absorption of water and of the salts by the blood-vessels.

As anæmia may be induced by different causes, it may be well at this time to give you a brief history of the patient's case.

R. P., sailor, æt. 39, admitted March 26, 1872. His history previous to the commencement of his present illness is good, and he has, so far as can be ascertained, no predisposition to any hereditary disease. He states that during the month of November he was in the Belize, exposed to the emanations of marshes, and that about the middle of December he sailed thence to the island of St. Thomas, where he remained for some weeks. On February 16, the day before leaving St. Thomas, he had a severe headache, which continued until February 18, when he was seized with vomiting and a chill of great severity. About a week later, exhausting diarrhœa set in. Quinia was administered to him by the captain of the vessel, but apparently without effect, for shortly after admission he had a well-marked chill. He was immediately prescribed large doses of quinia, twenty grains in the twenty-four hours, with directions to the resident physician to increase the amount if this were not sufficient to prevent a recurrence of a paroxysm. Opium suppositories were used for the purpose of controlling the diarrhœa, recourse being had to these rather than to opium by the mouth, in consequence of the extreme irritability of the stomach. His diet was of course carefully regulated, and consisted in large part of beef-tea and milk. Under this treatment he rapidly improved, and we have now apparently nothing left to contend with but the anæmia; and the dose of quinia has consequently been reduced to six grains daily. We are giving him in addition small doses of the tincture of the perchloride of iron, which he bears perfectly well. So far as I have been able to discover, he has no disease of any of the solid viscera. The oedema of the feet, which you observe to be present, naturally suggested disease of the kidneys or of the heart, but upon examination the urine was found not to contain albumen, and there is no discoverable organic disease of the heart. The dropsy depends therefore simply upon the fact that in this case, as is usual in anæmia, we have a thin blood, blood-vessels with relaxed walls, and a feeble heart causing a sluggish circulation: circumstances all of which are favorable to the extravasation of

the serum of the blood into the cellular tissue of the most dependent portion of the body.

As it is my purpose to dwell more particularly, this morning, upon those points in the history of this case which are illustrative of anæmia, it may be well for us to inquire, before proceeding further, what are the causes of this condition. It seems to me that these may be conveniently classified under three heads. First, causes producing a direct or indirect loss of blood; secondly, causes which act by interfering with the proper nutrition of the body; and thirdly, diseases accompanied by a more or less rapid breaking-down of the blood-corpuscles.

Under the first head would of course be placed all cases arising from the various forms of hemorrhage, whether occurring from disease, from accident, or as a part of medical treatment, as in venesection. Also cases consequent upon profuse suppuration, over-lactation, diarrhœa, Bright's disease, diabetes; or upon any disease giving rise to an excessive discharge, no matter what the nature of this may be. Formerly, anæmia was frequently produced as the result of treatment; but recourse to the lancet is now so infrequent, and the amount of blood taken in this way is generally so small, that this reproach can no longer with justice be made to physicians. It is scarcely necessary to explain to you that a discharge constitutes a heavy drain upon the blood, and cannot long continue without producing an impoverishment of the circulating fluid. The causes which I have placed under the second head are more numerous, but their action is none the less sure, even if it appears to us to be less direct than that of the first set. They may be enumerated as follows: food of poor quality or deficient in quantity; pain, grief, or any emotion which by retarding digestion interferes with the proper assimilation of food; occupations—as, for instance, mining—in which the workman is confined in damp, ill-ventilated places, where he is deprived of pure air and sunlight, and where, consequently, the proper oxygenation of his blood is prevented. Under the third head may be included many of the acute, and some of the chronic, forms of disease. Rheumatism and typhoid fever frequently produce temporary anæmia, which disappears during convalescence. It is also developed with even greater rapidity in the course of purpura and scorbutus. The influence of certain chronic diseases, however, in producing anæmia, is even more marked: hence it is a characteristic symptom of phthisis, cancer, and intermittent fever.

We have in the history of the patient before us two well-recognized causes for the anæmia which is present: intermittent fever, accompanied by chills of great severity, which he assures us continued from February up to the date of his admission to our hospital; but this cause could scarcely alone have given rise to anæmia of the intensity which existed in his case: at least I have never happened to meet with such an instance of the effects of paludal poisoning. I am therefore disposed to attribute the larger share in the production of his anæmia to the diarrhœa, which, as I have already said, he represents as having been almost colliquative.

The pallid appearance of the patient, his bloodless lips, gums, and tongue, all point unmistakably to anæmia as the condition from which he is suffering. If we want further proof that this is really present, we have it in the feeble pulse, the frequent action of the heart, the tendency to syncope upon exertion, and the pale urine, all of which exist in this case. The rationale of these symptoms is so simple that I shall allude to it very briefly. The urine in health derives its color from the coloring-matter of the blood; if this is deficient, as it must be whenever the red blood-corpuscles are di-

minished in number, the urine must be pale. The tendency to syncope upon exertion is caused by the feebleness of the heart, which, when overtaxed, fails in its efforts to send blood to the brain. The excessive action of the heart is in response to the demands made upon it by the system, which calls for good blood and receives little more than a slightly-colored serum. The feeble pulse is due to the fact that the contractions of the heart, although frequent, are not vigorous.

There are, however, physical signs furnished in anæmia, which are even more valuable as diagnostic aids than the symptoms above alluded to, because the latter are frequently little marked in cases in which the former are distinctly recognized. I allude of course to the anæmic murmurs. These may have their origin in the heart, in the arteries, and in the veins. How shall we distinguish the cardiac anæmic murmurs from those depending upon organic disease? This, as a general rule, is not difficult. We are to remember that an anæmic murmur is invariably heard at the base of the heart, that it has more tendency to be propagated in the course of the pulmonary artery than in that of the aorta, that it is always systolic in time and soft in quality, and that it generally coexists with the venous hum in the neck. I would add another character which, after having observed it for myself, I have found rather obscurely alluded to by some writers upon auscultation. The murmur will be found to be much more intense when the patient is in the recumbent position than when he is either standing or sitting. This will be found to be true in the case of the patient before you; and, since I have never failed to detect this greater intensity in the recumbent position in every instance in which I have auscultated anæmic patients, I believe it is a character of some importance in the differential diagnosis of anæmic from organic murmurs.

Arterial murmurs may sometimes depend upon alterations in the density of the blood, but they are of less value than either cardiac or venous murmurs. They are of course intermittent, and are always synchronous with the systole of the heart. The venous murmurs, on the other hand, are of great importance. They are continuous, not intermittent as is the case with arterial and cardiac murmurs; but, while continuous, they vary in intensity from moment to moment. They are generally humming or buzzing in quality, and are occasionally modulated so as to resemble musical sounds. These, when the veins of the neck are examined, unlike the cardiac murmurs, are most intense when the patient is standing, and are made more distinct by exertion. The jugular vein is the one generally chosen for examination.

The stethoscope should be placed between the two insertions of the sterno-cleido-mastoid muscle, preferably on the right side, because the course of the vein to the heart is here more direct than on the left side,—a circumstance which renders the current of the blood rather more rapid. The patient's head is to be thrown slightly back, and his chin should be turned to the side opposite to that examined, so that the muscles of the neck shall be tense and a slight pressure exerted upon the vein. Gentle pressure should also be made with the stethoscope; care, however, being observed that this is not pushed too far, or else the current of the blood in the vein will be obstructed and the murmur cease. You may easily satisfy yourselves that the sound is of venous origin by compressing the vein in its course above the point to which you have applied the stethoscope, when you will find that the murmur is no longer heard; relaxing the pressure, it will again be perceived. If there is at the same time, as very often happens, a murmur in the carotid artery, care will enable you to recognize it as well as the venous hum. You are scarcely likely to mistake the respiratory sounds in the larynx, and it

is sufficient to remind you that these are heard upon the side of the neck.

The cause of these murmurs has never been very satisfactorily explained. By some they have been attributed to vibrations taking place in the valves of the heart or veins, or in the walls of the latter; by others to the readiness with which currents arise in a thin blood. In favor of the latter view is the fact, which we may demonstrate for ourselves, that waves are more readily excited in liquids of little density than in those of greater consistence. Unquestionably we must explain the murmur in this way whenever it is heard over veins unprovided with valves, or having walls which we may assume are incapable of vibrations, as the sinuses of the dura mater. Still, I am not disposed to throw aside the other explanation of their mechanism. In anæmia we have not only thin blood, but also poorly-nourished tissues, and among these are of course the valves of the veins and heart, and the walls of the former. We will admit that the normal vibration of the valves of the heart gives rise to sounds as distinguished from murmurs; but in the general relaxation of tissue which attends anæmia it is reasonable to suppose that such irregular vibrations may be excited in the valves and walls of the vascular system as will give rise to murmurs. Duchek, the successor of Skoda at the Vienna School, has recently referred the venous hum, or *bruit du diable*, as it is called by the French, to the vibrations of valves in the jugular vein which are situated immediately below the point over which I have just directed you to place your stethoscope; but I have already told you this murmur is heard in veins unprovided with valves. I am sustained in this view by the fact that murmurs are sometimes heard under circumstances where, from the appearance and history of the individual, it is impossible to admit either anæmia or organic disease. In very nervous persons who are undergoing examination for life-insurance such murmurs are occasionally observed, and it does not seem to me too much to assume that in these cases there is relaxation of the tissues composing the vascular system, which causes irregular vibrations of the walls of the vessels.

Before passing to the subject of the treatment of anæmia, I wish to allude again to the anæmic murmur at the base of the heart, and which I told you was most distinctly heard when the patient is lying down. I have not been able to find a wholly satisfactory reason for the latter fact. It has seemed to me probable, however, that it might in some way be connected either with some altered relation of the heart to the great vessels at its base, or else with the restraint which the recumbent position exercises upon the freedom of the respiratory movements. The venous hum is best heard when the patient is standing, simply because in this position the return of blood from the head to the heart is favored, and consequently the current is more rapid, which is the case also after exertion.

Of course the prognosis in anæmia must depend to a great degree upon the removability of its cause, and your knowledge will tell you which, among the causes I have enumerated, are within the control of the physician. In the case before you I have no hesitation in making a favorable prognosis,—not only because intermittent fever and diarrhœa are generally curable, but because of the great improvement which has already taken place in the patient's condition. At first it was questionable whether recovery could take place; and had the irritability of the stomach continued, I fear he would have fallen a victim to it.

The treatment has been simple, and consisted of antiperiodics in the beginning, and, later, of tonics. Within a few days I have given the patient small quantities of the tincture of the perchloride of iron, which I think has undoubtedly been productive of part

of the improvement in his health. It is important to regulate the diet, which should consist of easily-digested and highly nutritious food. Other drugs than iron will sometimes be of service in the treatment of anæmia; and of these I know of none better than arsenic, which may be given either alternately with iron or conjointly with it.

ORIGINAL COMMUNICATIONS.

ON SOME CASES OF EMPHYSEMA OF THE NECK

DUE TO LESIONS OF THE RESPIRATORY APPARATUS.

BY WILLIAM PEPPER, M.D.

(Concluded.)

ONE of the most interesting points in the cases of obstetrical emphysema last alluded to lies in the fact that they present, in their simplest form, the effects of intense expiratory efforts upon the pulmonary tissues when in a perfectly healthy state, and that we are therefore able to argue from these results as to what effects will follow in analogous cases. It is in the first place evident that the explanation of the occurrence of interlobular emphysema of the lungs must have a close connection with that of the ordinary vesicular form. In the one case the distending cause acts violently and abruptly, and rapidly produces so great a degree of dilatation that the delicate walls of the air-vesicles tear; while in the other the distending cause acts with frequent iteration but with less intensity, and the tissues, which are often the seat of some degeneration or peculiar feebleness, gradually yield, and there results a permanent dilatation of the air-sacs.

It is well known that two antagonistic theories are held by different authorities as to the mode of production of emphysema: one, the *inspiratory*, which attributes it to the excessive operation of the forces concerned in inspiration; the other, the *expiratory*, which explains the dilatation of the vesicles as the result of violent but impeded expiratory efforts. The inspiratory theory is still upheld by some eminent writers, although clinical observation is gradually leading to its abandonment. In its original form it was based upon the erroneous hypothesis that the forces of inspiration were greater than those of expiration, and that consequently emphysema might result from mere excessive inflation of the lungs. This has, however, been universally abandoned as of general application, since the discovery of the important fact that in *forcible* breathing the power of expiration is considerably greater than that of inspiration; though I have no doubt that in some morbid conditions of the pulmonary tissues violent inspiration may of itself be capable of producing emphysematous distention of the air-vesicles.

The form of the inspiratory theory which is still retained by some authorities is based upon modifications introduced by Dr. William Gairdner, and is an expansion of the idea that if certain portions of the lungs are, from collapse or other cause, incapable of expansion, the atmospheric pressure will determine excessive dilatation of the remaining portions in order to prevent the occurrence of a vacuum as the thoracic walls expand. There are, however, such grave objections to this theory, which it will be observed rests upon the supposition that the expansion of the thorax and the amount of air inspired remain at the normal point although portions of the lungs are collapsed or otherwise rendered unable to expand, that I am strongly inclined to regard the *expiratory* theory as the only one capable of general clinical

application. We owe to Sir William Jenner chiefly the satisfactory refutation of the principal argument which was formerly brought against this latter theory,—that “the expiratory act is mechanically incapable of producing distention of the lung or of any part of it. The act of expiration tends entirely towards emptying the air-vesicles by the uniform pressure of the external parietes of the thorax upon the whole pulmonary surface; and even when the air-vesicles are maintained at their maximum or normal state of fulness by a closed glottis, any further distention of them is as much out of the question as would be the further distention of a bladder blown up and tied at its neck by hydrostatic or equalized pressure applied to its entire external surface.” (Gairdner.) A little consideration of the anatomical relations of the lungs to the thorax shows the falsity of this argument. The different portions of the lungs are in contact with surfaces and tissues of very different degrees of resisting-power; and, while the entire postero-lateral portions are supported by the unyielding ribs, the apices are covered only by soft tissues, and the anterior borders of the lungs are supported externally by the comparatively-yielding costal cartilages, while centrally they are able to encroach considerably upon the tissues of the mediastinal spaces. In ordinary free expiration the air is forced out of the lungs by a pressure so moderate and gradual that even the weakest parts of the thoracic walls are sufficiently firm to maintain it. But when the expiratory efforts become more violent, the air is pressed with great force from the central, basic, and lateral portions by the ascent of the diaphragm and the compression of the thorax, while the outward current from the apices and anterior margins is comparatively feeble. If, therefore, from any cause the normal relation between the volume of the expiratory current of air and the calibre of the large bronchi be disturbed, the portion of air which cannot escape will be driven violently into the apices and anterior margins, not only overcoming the outward current of air proceeding from those portions of the lungs, but producing an excessive degree of distention of their air-cells. The strongest possible confirmation of the truth of this view is to be found in the fact that emphysema of the lungs, both vesicular and interlobular, is found to be developed in the various parts of the lungs in precise correspondence with the degree in which they lack firm external support.

There are two ways in which a disturbance of the above relation may be effected: either by an obstruction in the air-passages which prevents the free escape of the air, or by the expiratory act being so sudden and violent that the volume of air hurriedly forced from the air-vesicles is too great to pass freely through the primary bronchi. Instances of this latter condition are familiar to all in violent fits of coughing, during which, even when there is no obstruction in the air-passages, the degree of distention of the apices may be appreciated by the bulging of the supraclavicular tissues. The full pulmonary resonance which is elicited by percussion of this bulging proves conclusively that it is due to distention of the apex. No less marked instances of the other condition are to be found in cases of membranous croup, of tumors of the larynx, or of partial obstruction of the bronchial tubes from the pressure of enlarged glands. The most extreme illustration is, however, as we have seen, to be found in the second stage of labor, where the glottis is firmly closed while the most violent and prolonged expiratory efforts are made to aid in the process of expelling the fœtus. The tissues of the apices and anterior borders of the lungs are subjected to a terrific degree of strain, there is marked supraclavicular bulging of the apices, and when the expulsion of the fœtus is arrested, rupture of some of the pulmonary air-vesicles may occur, with the production of interlobular, mediastinal, and external emphysema. We see here, then, in its most

uncomplicated expression, the influence of excessive expiratory efforts in suddenly producing excessive distention and rupture of the air-cells of healthy lungs. The same result has been seen in cases of hydrophobia, where there is spasmodic closure of the glottis with violent tumultuous action of the expiratory muscles. It will easily be understood, therefore, that the operation of the same forces, in a less violent but more frequently repeated way, may give rise to a more gradual distention of the pulmonary tissue without leading to rupture of the air-cells, or, in other words, may cause vesicular emphysema of the lungs. It is in this way that occupations which necessitate powerful straining efforts, as in lifting heavy weights, predispose to emphysema of the lungs; and comparative pathology teaches us that in the same way the lungs of draught-horses are frequently emphysematous. Of course the action of these forces will be greatly facilitated by any condition of degeneration of the walls of the air-vesicles which impairs their elasticity and contractility; and undoubtedly in many cases such a morbid state of the pulmonary tissue is the primary step in the development of emphysema. I have already alluded to the fact that interlobular emphysema may also be caused by the abrupt and violent expiratory effort attending a paroxysm of coughing, even when there is no obstruction in the air-passages and no morbid condition of the pulmonary tissue. Far more frequently, however, there is associated some cause of partial obstruction, such as the spasmodic contraction of the air-passages in whooping-cough, the presence of layers of false membrane in the larynx and trachea, or thickening of the bronchial mucous membrane with plugs of viscid tenacious mucus in the tubes. When such conditions as these are present, attended with frequent and violent coughing, everything is favorable for the development of emphysema of the lungs; and accordingly it is a matter of common clinical observation that such diseases are frequently followed by dilatation of the air-cells. My object at present is to call attention to the fact that here also the intense strain to which the air-cells in the apices and anterior borders (and to a less degree in the margins of the under-surfaces and in the posterior borders of the lungs) are subjected during the violent expiratory efforts attending coughing may lead to their rupture, with the production of interlobular and external emphysema. Such an occurrence is of extreme rarity in adult life, owing partly to the greater rarity of most of the diseases that are attended with paroxysmal cough, partly to the greater support to the lungs afforded by the thoracic walls, and partly perhaps to the less yielding character of the pulmonary texture. In childhood, however, the occurrence of cervical and even general external emphysema as a complication of pulmonary disease is not very rare. The following is the only instance that has come under my own observation; but Roger, writing in 1862 (*loc. cit.*), was able to cite nineteen instances which he had collected from the records of the previous twenty years.

Case IV.—Acute Miliary Tuberculosis: Cough and Dyspnoea: Cervical Emphysema—Interlobular Emphysema with Perforation of the Pleura: Emphysema of Mediastinum and Neck.—John F. was born of a stout, hearty young woman, 17 years of age, who nursed him; and he seemed to thrive until eight days before his death, which took place January 24, 1868, at the age of four months. The symptoms during his sickness were dyspnoea, occasional dry hacking cough, and anorexia. A few days before his death, subcutaneous emphysema made its appearance over the lower part of the neck in front, spreading over both sides and altering the entire contour of the neck, but not descending below the clavicles. The post-mortem examination was made fifteen hours after death.

The head was not examined. The subcutaneous emphysema persisted as above described.

On removing the sternum, the mediastinal spaces were found much distended with air, the meshes of the connective tissue in some spots forming vesicles more than one inch in diameter, and suggesting forcibly the appearances often seen in animals in the slaughter-house. The emphysema extended up along the trachea and larynx, and to a considerable distance on either side of the neck. There was not a trace of decomposition of the tissues. The lungs collapsed but slightly; the posterior portions were deeply congested, purplish, and almost non-crepitant, but expanded almost fully on inflation. There was neither pneumothorax nor pleuritic effusion or adhesions. The larynx, trachea, and lungs were removed, and inflated under water, when air was found to escape from the right lung in two places,—on the anterior face of the upper lobe, and on the inner surface of the apex. On examining the rupture on the anterior surface of the upper lobe, the opening was found to be very small, and to be seated in the midst of a spot where the pleura was separated from the lung so as to form a large vesicle. There were other smaller pearl-like vesicles studding the surface of the lung. The apex was the seat of numerous miliary tubercles, both in the substance of the lung and immediately beneath the pleura. At one point on its inner aspect there was such a subpleural deposit, half an inch in diameter, which had undergone cheesy change, and in the centre of which there was an ulcerated opening in the pleura. The escape of air through this perforation was prevented by the close apposition of a tuberculous bronchial gland, about half an inch in diameter, which lay immediately on the right bronchus. The other bronchial glands, especially on the right side, were also tuberculous. The left lung presented no perforation of the pleura. At several points, especially along the anterior edge of the lung, there were large emphysematous bullæ, one inch long by half an inch wide; and in the neighborhood were numerous smaller vesicles of the same nature. On incising the lung near these, small clusters of gray miliary tubercles were found. Miliary tubercles were also found on the peritoneal investment of the liver and spleen, and in the substance of these organs and of the mesenteric glands. There were small irregular ulcers in the lower part of the ileum, and numerous small yellowish submucous deposits in the cæcum.

The influence of age in favoring the production of this rare form of emphysema is very strongly pronounced. Of twenty recorded cases, including the above, six occurred before the age of two years, ten between two and four years, and four only of the patients had passed their first infancy. In all of these cases, further, the little patients had been suffering with some acute affection of the respiratory organs, attended with frequent and violent cough; in eight cases this primary disease was whooping-cough, in six pneumonia or broncho-pneumonia, and in six acute tuberculosis of the lungs. It is evident, therefore, that the necessary conditions were present in all the cases for the production of interlobular emphysema in the way before described, and that, owing to the large amount of air escaping into the interlobular and subpleural connective tissue, it forced its way to the root of the lung, and then escaped through the mediastinum to the subcutaneous tissue of the neck.

It seems to me highly probable that in the case I have just recorded, the rupture of the subpleural air-cells was directly favored by the presence of the miliary tubercles. There was certainly a very constant connection between the position of the patches of tuberculous deposit and the bullæ of subpleural emphysema. It may be that the tuberculous process had led to a loss of firmness and elasticity in the walls of the neighboring air-vesicles, and thus favored their rupture; or else that in the incipient softening of the miliary tubercles a communication had been established between the subpleural or interlobular connective tissue and a minute bronchiole. This latter would seem to have been the mode of development of the subpleural emphysema in the following case, in which there was also pneumothorax, but no mediastinal or external emphysema.

Case V.—Broncho-Pneumonia—Acute Miliary Tuberculosis—Subpleural Emphysema, with Pneumothorax from Perforation of the Pleura.—Mary McC., aged 13 months, died February 11, 1868, after a short illness, during which the marked symptoms were dyspnoea and cough, with occasional vomiting.

At the autopsy the right lung was found congested and partially collapsed, but admitted of complete inflation. In the posterior part of the fissure between the upper and middle lobes, the upper lobe presented a separation of the pleura from the lung to the extent of half an inch in diameter. On the apposed portion of the lower lobe there was a similar large bulla. The lung-tissue immediately subjacent to these cavities was consolidated to a distance of one-eighth of an inch. On cutting into the bullae, they were found to be distended with air and dark sanious pus, and their cavities presented minute trabeculae and septa, consisting of bronchioles and the remains of ruptured air-vesicles. They had evidently resulted from a combination of patches of suppurative pneumonia of the superficial layer of the lung with subpleural emphysema; and it seemed reasonable to conclude from the unusual relations of the emphysematous bullae that they were due to the process of softening which had opened a connection between some of the terminal bronchioles and the subpleural connective tissue. There were scattered miliary tubercles in the upper lobe.

The left lung presented two similar but larger bullae (fully one inch in diameter), in exactly the corresponding position between the upper and lower lobes. There was a small perforation of the pleura in the one in the upper lobe. Two other similar but smaller cavities were found on the surface of the lower lobe, in each of which the separated pleura presented a perforation about one-sixth of an inch in diameter. There were traces of localized pleurisy in the neighborhood, but no adhesions; and a considerable pneumothorax had resulted, causing collapse of at least one-half of the lung.

The bronchial glands, spleen, and kidneys contained miliary tubercles. There was no decomposition of the tissues.

Both of these latter cases illustrate the fact that occasionally perforations occur in the separated portions of the pleura in interlobular emphysema, and give rise to pneumothorax. In Case IV. this latter result was prevented by the close apposition of an enlarged bronchial gland over one of the pleural perforations; while it is possible that the other was produced at the examination by the forced inflation of the lung, as otherwise it ought to have been followed by pneumothorax.

The development of interlobular emphysema, with the consequent mediastinal and external emphysema, must certainly increase any embarrassment of breathing which already exists; and, if they were to attain an extreme degree, might prove the determining cause of death. This, however, does not seem to have happened in any of the recorded cases; and although it is true that a great majority (sixteen out of twenty) of the cases in which this form of emphysema has been observed have proved fatal, death has in every instance been sufficiently accounted for by the nature or violence of the primary disease. The emphysema must therefore be regarded merely as a serious complication, but one which would not justify an altogether unfavorable prognosis in an otherwise curable condition. I have already remarked that in all the recorded cases of obstetrical emphysema the patients have made rapid and complete recoveries. There is but little to be said with reference to the treatment of external emphysema following lesions of the respiratory apparatus. In cases of parturition, when it makes its appearance, the patient should be compelled to moderate her efforts, or, if practicable, anæsthesia should be induced, and the delivery effected by instrumental aid. Where it occurs in the course of some pulmonary disease attended with violent cough, the indication clearly is to allay this by the use of antispasmodics and opiates. In regard to the emphysema itself, so long as it is moderate in degree, the removal of the air may safely be trusted to the efforts of nature, which will soon effect its absorption. This

may, however, be hastened by the use of gentle friction with some stimulating application. Only in cases where the degree of the subcutaneous emphysema is very extreme, and where, by its mechanical action, it evidently interferes with respiration, and thus increases the pulmonary embarrassment, should small punctures be made in the skin, and the air allowed to escape or be gently pressed by the hand towards the openings.

CLINICAL NOTES.

BY H. C. WOOD, JR., M.D.,

Physician to the Philadelphia Hospital.

FATAL CASES OF PERICARDITIS.

IN my wards at the Philadelphia Hospital there are brought constantly under my care numerous cases which, without being extraordinary, are of clinical interest; and I have thought of offering notes on such cases, from time to time, to the readers of the *Medical Times*. The present paper will be restricted to two fatal instances of pericarditis and pleuritis.

Case I.—W. K., aged 50, rather corpulent, and a moderate drinker, came into the wards of the hospital January 15, suffering from acute inflammatory rheumatism produced by exposure to cold and wet. He was perfectly helpless,—unable to move any of his limbs. He was ordered acetate of potash \mathfrak{z} i daily; Dover's powder as required. The following notes are taken from my ward-book:

January 17.—The man says he has had some cardiac pain, but has none at present. There is decided cardiac tenderness. Both basal and apical heart-sounds are very feeble and distant, especially the first, which cannot be detected with certainty; both are masked by a distinct to-and-fro friction-sound, which is loudest two inches above and two inches to the left of the nipple; cardiac percussion-dulness scant five and a half inches. Joints are less swollen than they were. The potash has already been suspended, on account of its sickening him. He is ordered calomel, gr. i., with $\frac{1}{8}$ gr. of opium, every three hours, and a blister over the heart.

January 20.—Since the 16th the morning temperature has been 100°, or a fraction less, and the evening from 101° to 103°; the pulse from 90 to 100, and the respirations from 22 to 25, per minute. There are some indications of pytalism, and amount of mercury lessened.

January 22.—Pytalism more decided. The swelling and pain in the joints are much less than they were some days ago. The cardiac sounds have become very audible, and they are apparently normal.

January 27.—Morning and evening temperature have had the same range as before. The man, it is found, has gone out of the ward in bare feet and night-clothes, and his shoulder and arm are consequently more painful than they were. Mercury withdrawn; has only produced very slight pytalism. Ordered potass. iodid., \mathfrak{z} ss daily.

January 30.—Temperature-range as before. Pulse from 108 to 120, respirations from 24 to 28, per minute. The cardiac-apex sounds are normal. There is a soft prolonged rubbing murmur, heard loudest at middle of sternum, from one-half to one inch above line of nipple. At times this is absent, and it is found that on forced inspiration it becomes very loud, and on forced expiration is altogether lost.

February 4.—The man is stronger, and seems better; his shoulder easier. His temperature has fallen so that it rarely gets up to 100° in the evening. He is, however, very pale, and the cardiac sounds are unchanged.

February 6.—Cardiac murmur is only to be heard during forced inspiration.

February 16.—No material change; man somewhat stronger, but still weak. The general rheumatic symptoms are better. The morning temperature from 98° to 99°, and the evening from 99° to 100°. The sounds of the heart are distant and feeble, and there is evidently fluid in the pericardium: the vertical cardiac percussion-dulness is fully six inches. The liver is evidently much enlarged.

February 25.—The man is very pale and anæmic. There is no præcordial tenderness, and the dullness has lessened half an inch. The evening temperature is rarely above $99\frac{1}{2}^{\circ}$.

I was at this time called away from the city, and did not revisit the hospital until March 15. During my absence no notes were taken of the case.

March 15.—States that he has been much worse, and has suffered from cough and shortness of breath for ten days. Physical examination reveals the following:

Left lung.—Complete dullness on percussion, laterally and posteriorly, to nearly two inches above the nipple. Vocal resonance much higher in pitch, rather different in quality, and louder, than on right side. Anteriorly, percussion-dullness commencing above nipple, downwards; not changing on movement of patient. Vesicular murmur rather rude at apex; below percussion-line, replaced by faint tubular breathing; conjunctiva slightly icterode. Has had slight cough for ten days. Three weeks ago had hæmoptysis; free from it since, until about ten days ago. Has now gelatinous, thick, slightly-purulent, bloody sputum. Treatment, poultices to lung, and support.

March 20.—No change in physical signs, but man is evidently failing.

March 25.—Man dead.

Before my absence from the hospital, there had been some points of especial interest in this case, chief among which was the disappearance and reappearance of the murmur in different states of respiration, which persisted for a number of days. After my return, however, the diagnosis became much more difficult. The question was to decide whether there was pleurisy or pneumonia affecting the left lung. There was unchanging percussion-dullness with bronchial breathing above, and total silence on auscultation below. This conjunction of physical signs certainly pointed towards the existence of pleuro-pneumonia, but, misled by the very marked bronchophony over the whole dull region, although the existence of pericarditis would have suggested pleurisy, I diagnosed simply pneumonia.

Since this case I have seen several in which, with little or no pneumonic consolidation of the lung, and large pleural exudation, there was marked bronchophony; so that I have learned to look upon this physical sign as of but comparatively little importance in making up a diagnosis of consolidation.

The autopsy was as follows:

Left pleura walled with lymph all over it, full of fluid; lung pushed up to upper part, consolidated, deep blackish-red, when cut effused blood running out in quantity,—about two quarts. *Pericardium* posteriorly completely consolidated to heart, closely adherent to diaphragm; anteriorly very much thickened, forming a cavity full of fluid, and containing a large amount of lymph; honey-combed on the cardiac surface. Heart valves normal; hypertrophy with softening of walls. *Liver* enlarged, congested, hardened. *Kidneys* a little congested; otherwise normal.

The notes in the second case were only taken for a few days before death, and are too brief to be of much interest, excepting in the fact that pericarditis and pleuritis had apparently existed for some months. The diagnosis during life was pleuritis and pericarditis; the "swashing sound" being evidently a friction-sound.

Case II.—April 24.—K., aged 60, female. Patient wanders a little,—contradicts herself frequently. As well as can be determined, she was doing house-work about six months ago, when she caught a bad cold. This was followed by severe pains in the chest on both sides, and swelling of the joints. She was unable for some time to do her work; says she had no fever, and had just been able to keep around until within six or seven weeks, when she had to go to bed. Complains of having been badly treated, overworked, etc. Denies having been intemperate. Her statements evidently cannot be depended upon. In both lungs, postero-inferiorly, flatness on percussion, with absence of vesicular murmur on right side. Fine friction-râle all over cardiac region, in lying posi-

tion, at apex, first sound long, with a peculiar "swashing" sound, abruptly terminated without distinct second sound. At aortic base, sounds nearly normal. The "swashing" sound is loudest about one and a half inches above apex. Apex-beat sharp, prominent, one and a half to two inches below nipple. In sitting posture heart acts more irregularly, with often a clicking sound at end of "swashing" sound. No increase of heart-dullness; has been marked cardiac tenderness and pain, but there is none at present. Pulse exceedingly feeble; 150. No transmission of murmur to abdomen. No murmur on left side of neck. On right side audible beating of arteries; on both sides increased pulsation.

April 27.—Woman delirious; pulse cannot be counted at wrist; heart beating with intense rapidity; sounds very indistinct,—not separable.

April 29.—Dead.

Pleura.—Considerable effusion on both sides, especially the right. Filling up the whole of the right pleura, hard, tough, false membrane, thoroughly organized, evidently of long standing, but with marks of recent inflammation.

Left pleura nearly free from false membrane posteriorly; anteriorly, considerable false membrane.

Left lung.—Cicatrix at the apex; otherwise nearly healthy.

Right lung intensely congested, full of fluid; nearly the whole of it solid, with dilated bronchi; sinking in water.

Pericardium anteriorly closely adherent to the heart, and very much thickened, red, and rough; *posteriorly* nearly free from the heart, but much thickened. *Mitral valve* much thickened and hardened, but not at all ulcerated; flexible. *Semilunar valves* normal, but with a few little cauliflower excretions not interfering with functions.

A DIAGNOSTIC SIGN OF FRACTURE OF THE FIBULA IN THE LOWER THIRD.

BY W. W. KEEN, M.D.,

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FRACTURE of the fibula, from one to three or four inches above the malleolus, is a tolerably frequent accident. So far as my experience goes, external lateral displacement of the foot is by no means so common as is taught in many text-books. In four fractures of this bone in this situation I have had under my care in St. Mary's Hospital, and one in private practice, in the last three years, not one presented any displacement. Crepitus cannot always be elicited, for in three of these five cases it was absent; nor is marked preternatural mobility of the foot easily or always recognizable. When a patient, then, presents himself with this accident, and especially if the swelling is great, it is by no means easy to make a differential diagnosis between a fracture of the lower end of the fibula and a bad sprain of the ankle-joint. I desire, therefore, to recall the attention of the profession to a valuable sign of such fractures,—a sign which I find all the more recent writers on Surgery, and even on Fractures, except Malgaigne, have overlooked.

The anatomical relations of this joint are so peculiar that they can be made of service in assisting



FIG. 1.



FIG. 2.

the diagnosis. In the normal condition (Fig. 1) the astragalus (A) is mortised in between the malleoli so securely that no lateral movement of that bone is pos-

sible. When, however, a fracture of the fibula occurs above the malleolus, the ends of the fragments at the point of fracture approach the tibia, or by grasping the leg at this point can be made to approach the tibia, and thus the intermalleolar space is widened. (Fig. 2.) The result at once is that lateral movement of the astragalus becomes possible. In order to obtain it best, grasp the leg firmly with the left hand at the probable site of the fracture; grasp the foot with the right hand, the palm being applied to the sole and the thumb and fingers to the astragalus itself; then bring the astragalus next the fibular or external malleolus, and endeavor suddenly to strike it against the internal malleolus, which is firm and immobile. If there be a fracture, the impact of the bones will be readily felt in most instances. It could be obtained in four of the five cases above alluded to. One caution must be noted: the lateral movement of the tarsal bones, especially between the os calcis and the astragalus, and the os calcis and the cuboid, must not be mistaken for this lateral movement of the astragalus. The *astragalus* must be seized and moved laterally, and not the *foot* itself *twisted* internally. I give the following case in illustration of the use of the method.

E. C., æt. 53, fell on the ice Dec. 26, 1870, and caused an injury to the left leg above the ankle. There was no deformity and no crepitus. The leg was greatly swollen. Fracture of the fibula was suspected, but the diagnosis was not clear. His leg was placed in a fracture-box, and lead-water and laudanum were applied. At the time of injury he was intoxicated, and delirium tremens soon manifested itself; so that he removed the dressings, it was found, for several nights, and walked about the room. I first saw him January 1, and confirmed the symptoms mentioned, but made the decided diagnosis of fracture of the fibula by reason of the lateral movement of the astragalus, which was very distinct. The point of fracture was two inches above the malleolus. The leg was very much swollen, and erysipelas seemed imminent. I applied the silicate of soda immovable dressing, and ordered one-fourth of a grain of morphia, with twenty grains of chloral and three drops of tincture of aconite root, every three hours; the effect of the remedies to be carefully watched. He soon became quiet, and remained so. In three days the swelling subsided, so that the silicate of soda dressing had to be removed and a tighter one applied. This was kept on till just before his discharge, January 23. The inter-malleolar space was still slightly widened, but the joint was not stiff nor was the leg unstable. He walked as well as he ever did, and without support.

A MODIFICATION OF THE OPERATION FOR PHYMOSIS.

BY HARRISON ALLEN, M.D.,

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THE modification proposed is based upon the truth of the following statements: 1. The glans penis lies obliquely backwards to the longitudinal axis of the penis. 2. Contraction of the preputial orifice, from chancres, scars, or other rarer conditions, may create phymosis independently of other causes; but, as a rule, acquired phymosis, particularly if it be complicated with venereal disease, is due to inflammatory thickening of the entire mucous layer. In such cases the glans is compressed, as with a rind, by a stiff, inelastic membrane. If there be much narrowing of the preputial chamber, the penis is jammed backwards in its sheath, and its frænum is made tense from a fixed point below, and lies obliquely upwards and backwards.

Writers have cautioned us, in selecting the method of Ricord, not to be guided by the outline of the glans penis as defined through the integument, else too much of the latter may be excised. But even when the operation

is properly performed the incision imperfectly exposes the glans, thus making another incision through the mucous layer necessary. Besides this, the frænum is liable to mutilation by the first cut. This latter is an awkward occurrence, since union, under the best of circumstances, lingers about the frænum, and an undesirable bagginess of the integument at this point too often remains.

I have thus briefly indicated that the essential points of an operation for phymosis should be those that secure integrity of the frænum as well as exemption from too free incision of the skin-layer of the prepuce.

The method of meeting these points is simple. Having first slit up the prepuce upon a grooved director,—thus permitting the penis to assume its normal position to the sheath, and the true relations between it and the foreskin to be accurately determined,—the operator takes a straight needle, of moderate size, and, arming it with a single strand of well-annealed silver wire, transfixes both layers of the foreskin about a fourth of an inch in advance of the corona. Before pushing the needle through, that portion of the foreskin in front of the needle is snipped off with the scissors,—sufficient tissue being reserved to bring the edges together,—when a twisted suture is effected. The needle is next inserted at a point midway to the frænum, and the same procedure repeated as in the first instance. In consequence of the redundancy of the skin about the frænum, the division of the mucous layer is best effected at that point before that of the skin. The scalpel is better than the scissors for this purpose. The skin should be removed by the latter instrument after transfixion. Two sutures introduced upon the opposite side, in the manner already given, complete the operation. Should the spaces between the wires gape, they may be approximated by silk threads. These may be removed within twenty-four hours. The silver wires should be retained a day longer.

It will at once be seen that the retraction of the skin-layer is prevented by transfixing the two layers at the same point before the removal of the integument. This, indeed, is the gist of the whole matter. The slitting of the prepuce, instead of being a mere expedient to remove pressure from a threatened glans, or to explore for a concealed chancre,—uses to which it is commonly restricted,—becomes a stage of the operation of circumcision. Moreover, it enables the operator to dispense with the use of the fenestrated forceps.

This operation has been performed by myself and others fourteen times, and has given entire satisfaction in every instance.

THE IDENTITY OF PUS-CORPUSCLES AND LEUCOCYTES.

BY H. G. LANDIS, M.D.,

Niles, O.

IN the early part of November, 1871, while engaged in some studies of the blood, I noticed that my own abounded in white corpuscles to the extent of decided leucocythæmia, but paid little attention to the fact, so that I cannot state the exact proportions. A few days after, November 17, I found a boil on the back of my neck, which ran a painful course for two weeks. Before it had entirely healed, another appeared in close proximity, and remained for three weeks. I then began to inquire if the preceding excess of leucocytes in the blood had any connection with the subsequent collection of pus-cells. If this were true, *a priori* the leucocytes were drawn together and discharged by the furuncle, and further, being increased before, they should be diminished during the inflammation. Being

greatly occupied at the time, another large boil came on the neck unawares, being first noticed December 27. On the fourth day I examined my blood, drawing the supply in this and subsequent examinations from the middle finger of the left hand. The leucocytes were to the red corpuscles in the proportion of 1 to 600. On the eighth day this boil had finished its active career, and at the same time four small boils came on the neck, which on January 5 were apparently at their height. On this day, the white were to the red corpuscles in the proportion of 1 to 1000. On January 15 these four had almost disappeared, having suppurated very little, and the large boil had entirely healed; and on this day the proportions had risen to 1 to 300. On the 18th a small boil appeared, but did not suppurate, nor did it involve the subcutaneous tissues to any extent. On the 19th the proportion was 1 to 275. On January 24 the neck was tender, and two suspicious papules were felt; the leucocytes being in the proportion of 1 to 130. On the 27th three boils were evidently at work, and the whole neck was extremely sore, while the proportions had changed in three days to 1 to 500. By February 4 the boils had entirely and permanently disappeared, and the proportions were changed to 1 to 250. In this case, then, we have a suppurative inflammation preceded by leucocythæmia, and the changes in the blood so completely coinciding with the inflammatory processes as to leave little doubt that what were observed as white corpuscles in the blood afterwards escaped, and became, by virtue of this change of place, pus-corpuscles. I present this isolated case, in the hope that those having hospital facilities for the observation of acute inflammations may determine to what extent these changes may take place in different inflammations; and also as I believe it to be the first evidence drawn from the human subject which directly confirms Cohnheim's theory of suppuration.

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE.

SURGICAL CLINIC OF S. W. GROSS, M. D.

Reported by FRANK WOODBURY.

CARIES OF THE SPINE.

GENTLEMEN,—as this patient walks into the room, notice particularly the peculiarity in his gait. He moves hesitatingly and carefully, his body leaning a little forward and his head thrown back. This attitude is characteristic of the disease which is variously known as caries or tuberculosis of the spine, rachialgia, and Pott's disease. The last title, which is generally used, was given to it in honor of Mr. Percival Pott, who first carefully described the affection about the latter part of the last century. He investigated the subject more thoroughly than had been previously done, and brought the results of his researches, respecting the etiology and pathology of the disease and its proper treatment, before the notice of the profession. The correctness of his conclusions was subsequently proved by abundant experience, and their thoroughness and completeness were such that nothing of importance has been added to them by later observers.

This boy, although fifteen years of age, is poorly developed and has a pallid complexion. His eyes are large, with long lashes, and his general appearance is indicative of the strumous diathesis. On examining his back, we find a projection in the line of the spine opposite the lower borders of the scapulae, and at the spinous process of the seventh dorsal vertebra, which is about the usual seat of the disease. This trouble was first noticed by the mother about six weeks before. She then observed that he leaned forward in walking; that he became easily tired; and when he stooped down, recovered the

upright position with difficulty. He also complained of pain in the back, which led her to examine the spine, where she found the projection above mentioned. On pressing this, we find that it is tender, and by pushing the shoulders down we produce a sensation of pain. He also complains of pain in the back when he bends forward.

He states that he first noticed this pain in the back about six months ago. It would come on at intervals, and proceed along the ribs as if a cord were drawn around the chest. This pain was sub-acute in character, and was at times accompanied by a pain in the head and cramp in the stomach. It was irregular, coming on at different periods. He does not sleep well; he moans and is restless at night, waking up at times with a scream and a sensation of distress. (Please notice the similarity existing between these symptoms and those of hip-joint disease.) His appetite is good, except when the pains come on, which make him sick at his stomach. (Patient directed to wait in the other room.)

If a child is brought to you complaining of pain referred to the intercostal spaces, and the lungs and liver are found to be normal, you should have the patient stripped and carefully examine the spine. Especially are you justified in suspecting caries when he has cramps in the stomach, and wakes suddenly at night with pains,—more particularly where they extend around the body and produce nausea in the stomach. In scrofulous affections of the joints of the vertebrae, or of other joints in the body, the first symptom, generally, is pain. In incipient hip disease the pain is referred to the knee, which has been often rubbed and blistered for its relief. This pain elsewhere than at the seat of the disease is explained by the connection of nerves. The obturator nerve sends a branch to the round ligament which ramifies in the synovial membrane of the hip-joint. When this becomes inflamed, the sensation of pain is carried along the obturator nerve, and is referred to its point of distribution about the knee. This is also illustrated by the present case. The pain is referred to the sides of the chest, while the seat of the disease exists in the spine. This is due to the intimate connection between the sheaths of the nerves and the periosteum lining the intervertebral foramina through which the nerves pass. If there is inflammation of the periosteum of the seventh dorsal vertebra, there will be pain in the tract of distribution of the sixth dorsal nerve. This pain is a valuable symptom in determining the extent of the disease, as it will be unilateral or symmetrical, according as the disease is limited to one side of the vertebra or the entire width of the bone is involved. The pain and sudden waking at night are also easily explained. The adjoining surfaces of the vertebra and intervertebral cartilage are in a state of inflammation, and when they are forced in contact they produce pain. Some involuntary movement of the body during sleep produces pain: this sensation is reflected from the sensory to the motor nerves, and there is a strong contraction of the flexor muscles of the spine,—namely, the abdominal muscles,—and this brings the inflamed surfaces forcibly together, producing the severe pain and waking the patient. Pain by itself is of no value in determining the disease, but, when taken together with the other symptoms, it is a valuable diagnostic guide, especially in these joint affections. In caries of the atlo-axoid articulation there is pain in the head behind the ears, and in the extremities.

This is pre-eminently a scrofulous affection. But in saying this, I do not wish to be understood to declare that there must necessarily be a tuberculous deposit, as when bone is the seat of tubercular inflammation there may or may not be a deposit of this kind. In strumous ophthalmia, which is a tubercular inflammation, there is not necessarily tubercular material deposited in the eye. In ordinary simple or traumatic inflammation of bone, there is softening as the principal result, but in strumous inflammation the bone becomes very much enlarged by the dilatation of the canaliculi and Haversian canals. On section of a bone thus affected you will find a great increase of the cancellous structure, and the cells or spaces filled with a gelatinous material, or they may be the seat of true tubercular deposit. In caries of the spine this abnormal material is deposited either in the spongy structure of the vertebra; beneath, or in the substance of the periosteum; or in the intervertebral cartilage. This material finally becomes disintegrated and excites ulceration in the bone, which becomes

carious and even necrosed; as in this specimen on the table, from which I took several pieces of necrosed bone. In this other specimen the disease began in the inter-articular cartilage, which is destroyed, and the corresponding surfaces of bone eroded. The products of this inflammation form an abscess which frequently gravitates downward and receives the name of psoas or of lumbar abscess, according to whether it passes down in front of the psoas muscle and points in the groin, or passes backward and points in the lumbar region. In children, particularly when the collection is small, this matter is sometimes reabsorbed, while in adults we more frequently have the psoas and lumbar abscess following the vertebral disease.

The deformity is due to the destruction of the bodies of the vertebræ, and its degree will depend upon the extent of the disease. There being a direct loss of substance, the weight of the upper extremities forces the bodies of the adjacent vertebræ together; while the spinous processes of the vertebræ, whose bodies have disappeared, still remain intact, and being forced backward make the projection already noticed. It is to be understood that there may be considerable loss of inter-vertebral substance without producing appreciable deformity. The spinal column makes in its course three curves, and it is for this reason that when the disease occurs in the cervical or lumbar vertebræ it does not produce so much gibbosity as it does in the dorsal region, which is the most frequent seat of the disease.

At whatever point destructive inflammation is going on, there is always a circle of reparative inflammation surrounding it. Thus in the ordinary boil there is a deposit of plastic lymph to limit the disease. So in Pott's disease this reparative process accompanies the disease, and glues together the spinous and transverse processes of the vertebræ affected: this assumes the form of provisional callus; and, if undisturbed, will ossify, and bony ankylosis will take place. This is one way in which a cure results in this affection. The mass becomes strong enough to support the head and shoulders, although it will always remain a weak spot; and if the patient should be so unfortunate as to fall down-stairs, he would be very apt to break his back. This loss of mobility of several of the vertebræ is one of the diagnostic signs of the disease.

In the later stages of the affection you may have paralysis coming on as one of the results. This is not due to compression of the medulla spinalis by the angular curvature of the spine, but is produced by the extension of the inflammation to the meninges, or even to the cord itself. This complication occurs most frequently in adults; the disease itself being most common in children under ten years of age, and being evidently the result of a constitutional taint. The accidents that are sufficient to light up the disease, in children with the strumous diathesis, would produce little or no effect on a healthy child.

From the alteration of shape of the spine there must be a corresponding change in position of the lungs and heart, necessarily affecting their nutrition and the proper exercise of their functions. This is a predisposing cause to disease in these organs, and the subjects frequently die from consumption from this cause combined with the deposit of tubercle in the lungs, common in strumous affections.

The treatment of this disease is rest, absolute and positive rest, in the horizontal position, not leaving the bed at any time or under any consideration, using a fracture mattress or bedpan. This must be continued for six, ten, or twelve months, or until the disease is arrested and the bones consolidated. At the end of six months, or when you think the cure is effected, you may examine the spine, and if there is any evidence of pain, either on pressure or on jumping from a chair, the patient must return to bed, and lie there two months at least before the examination is repeated. Some writers denounce this treatment, and say that the patient pines away for want of exercise. It is no such thing. The sufferer is relieved from pain, and he gets ruddy and fat, and soon becomes accustomed to the position, and prefers it. There are certain kinds of apparatus, designed to brace the shoulders and spine, and cure the disease, while the patient runs around. It is simply impossible to make a good cure in any other way than the treatment I have laid down; and if this is not strictly carried out, you should refuse to attend the case. You cannot expect to obviate the present deformity, but you can prevent

the extension of the disease. It is to be cured by the union of the adjacent vertebræ and bony ankylosis; but if the spine is unfolded in the apparatus before described, the bones will be separated and held apart, and it will be impossible to get bony union. The great cause of ununited fracture in other bones is the want of perfect apposition.

The patient must have a hair or husk mattress that will give firm support to his back, and for this reason a feather bed must never be used. He must be kept in good condition by tonics and alteratives, and fed on plain food. Forbid meat, green fruits, sweetmeats, pastry, or candies.

Counter-irritation by the actual cautery or tincture of iodine is a valuable aid in the treatment of severe cases.

He is to go directly to bed, and take,—

R Tinct. ferri chloridi, fʒij;
Tinct. nucis vomicæ, fʒiiss;
Hydrarg. chlorid. corros., gr. i-16. M.

Sig.—Twenty drops, three times daily.

R Ol. morrhue, fʒvj;
Potassii bromid., ʒij. M.

Sig.—Two teaspoonfuls after each meal.

His body may be sponged frequently with water in which a moderate quantity of common salt has been dissolved.

WILLS OPHTHALMIC HOSPITAL.

SERVICE OF H. EARNEST GOODMAN, M.D.

Reported by CHARLES K. MILLS, M.D.

SIMULATION OF AMAUROSIS.

R. H., æt. 11, was brought to the hospital by his father, who said—the son confirming his statement—that eighteen months before, the latter had suddenly, and without assignable cause, become entirely blind in the right eye, the vision of the left eye remaining normal. The eye complained of had never been inflamed, and had a natural, healthy appearance. No ptosis, strabismus, or paralysis of the sphincter pupillæ could be discovered. The boy said that the eye pained him occasionally. On attempting to test his vision, he declared that he could not read any type placed before him, that he could not even count fingers held within a foot of his eye. He said that he could not make out the daylight clearly with the affected eye, but that there seemed to be a "smoky air" before it.

Before coming to the hospital, the patient had been in the hands of a self-styled "electrician," and the father asserted that the lost vision had been on several occasions completely, but only temporarily, restored by means of an electro-magnetic instrument; and in order to demonstrate the truth of this statement, he was allowed to apply one electrode of a small inductive apparatus over the boy's eye and the other to the back of his neck, as he had been in the habit of doing at his home. When the current had been passing for about half a minute, the patient, with the left eye closed, read with ease No. XX of Snellen's types, at twenty feet, showing a normal acuity of vision in the eye which just before had been apparently useless.

Ophthalmoscopic examinations, made both before and after the application of the electricity, had failed to reveal anything upon which to found a diagnosis.

The boy was sent home, and directed to return if his sight became again impaired. He came back in three days, stating that he had again gone totally blind in the right eye. The genuineness of this peculiar case of monocular amaurosis had been suspected from the first, and glass prisms, as recommended by Von Græfe and Von Welz, were now resorted to, in order to settle positively the question of malingering.

A prism of 10°, with its base upwards, was placed before the left eye,—the one known to be healthy,—and the patient was asked carelessly, so as not to arouse his suspicions, to look at a light, a few feet off. He at once said that he saw two lights, proving simulation; for it follows from the principles of the refraction of light by transparent prisms, which bend light towards their bases, that, in order to have seen double, he must have used both eyes. The experiment was repeated, with the base of the prism downwards,—this also causing

diplopia. Placing a plain red glass before the apparently amaurotic eye, and retaining the prism before the other, two images of different colors were seen. When the prism, as advised by Von Welz, was set horizontally before the eye, it caused a corrective squint, and, on removing it, the optic axes, which had been in lines not coincident, at once became correspondent. To complete the demonstration of the simulation, the boy being entirely off his guard, still holding the prism before the eye acknowledged to be good, he was directed to read some fine print at a distance of about a foot, and, while reading, an opaque object was quietly and gradually pushed before the glass, until it was entirely covered, without interfering in the least with the reading.

This was a curious case of malingering. At some past time there may have been some real trouble with the boy's eye; but certainly when examined none could be made out. He had apparently no object in keeping up the deception. His father stated that he was fond of going to school; and also that once during vacation he had been brought from the country to the city, much against his will, because of his supposed loss of sight. It was found on inquiry in regard to the rest of the family that the child's mother had been blind in her right eye since a short time before his birth. Constantly observing and hearing of her misfortune may have had something to do with his hallucination.

SYPHILITIC IRITIS.

D. H., æt. 26, a printer, afforded a case which illustrated the great benefit to be derived from energetic treatment in the incipient stages of specific disease of the eye. He acknowledged having had gonorrhœa several times, but did not remember ever having been affected with chancre or bubo. His general health was good. One week before coming for treatment, his left eye, which had been subject for several months at irregular intervals to slight inflammatory attacks, began to trouble him again, and at the time of his appearance at the clinic showed signs of violent inflammation. He complained of frontal and deep-seated ocular pains. A commencing pinkish zone around the cornea, and the straightened character of the engorged blood-vessels, indicated scleritis. The iris was a little darker in color than in the unaffected eye. The post cervical glands were enlarged.

An eight-grain solution of sulphate of atropia was daily instilled. Two ounces of blood were taken from the left temple by the artificial leech. Ten grains of iodide of potassium and one-twelfth of a grain of the bichloride of mercury, three times daily, were prescribed. In one week, under this treatment, the patient got quite well; all pain and signs of inflammation having left the eye, and the enlargement of the glands having disappeared.

PANNUS.

B. V., æt. 14, four months before applying to the hospital, began to be troubled with his right eye, which watered, was intolerant of light, and a little painful; and although under treatment in the country, the eye had gradually been getting worse. The lids were found to be slightly granular. The ocular conjunctiva and subconjunctival tissue were injected. A well-marked vascular opacity of the cornea extended from its lower margin over the centre of the pupil, covering about one-third of the corneal expanse. An extension of granulations from the conjunctiva to the cornea had probably taken place. Yellowish nodules could be seen among the meshes of the blood-vessels. The patient complained of much photophobia, and of ocular and orbital pain. Vision in the affected eye was only quantitative; in the other it was normal.

Blood was at once taken from the right temple by the artificial leech; this operation being afterwards twice repeated. A solution of sulphate of atropia, four grains to the ounce, was instilled, and a solution of the same substance, two grains to the ounce, was ordered to be used daily. Nitrate of silver, two grains to the ounce, was applied to the lids every other day. Blue glasses were prescribed; quinine and iron were given internally; and good food and fresh air were enjoined. At the end of a week after the active inflammatory symptoms had subsided, the insufflation of calomel was commenced, and continued daily.

This patient remained under treatment six weeks. One

acute exacerbation, lasting four or five days, occurred; but otherwise he steadily improved,—his vision coming up from the mere perception of light to $\frac{2}{4}$ Snellen, or two-fifths of the normal acuity. The conjunctivitis and corneal vascularity entirely disappeared; but a slight opacity was left near the centre of the cornea. It was necessary for him to return to his home in the country, and he was directed to continue the insufflation of calomel.

MIXED ANÆSTHESIA IN OBSTETRICS.—The effect produced by the new combination of morphia and chloroform, just now so extensively employed in France, is called by Claude Bernard a condition of *mixed anæsthesia*. In a note from Guibert presented by Claude Bernard to the Paris Academy (*Gaz. des Hôpitaux*, June 25, 1872), the method of its employment in obstetrics is reported as follows:

It is in cases of difficult labor that this analgesia may be induced with the happiest effects. It diminishes the pains in marked degree, and may be continued for several hours without incurring the least danger to the mother, without injuring the condition of the infant, without modifying uterine contractions to any extent, and without increasing the subsequent danger of hemorrhage.

I am in the habit of employing this method as follows: I make a subcutaneous injection into the forearm of about one cgr. of chlorhydrate of morphia at the moment when the pains begin to be severe, or when agitation with anxiety and discouragement supervenes. A quarter of an hour after the injection I commence the inhalation of chloroform, by the ordinary method, at the beginning of a uterine contraction. So soon as a dozen inspirations have been made, the patient experiences, instead of an augmentation, an alleviation of the pain, while the contractions continue in force. I suspend the inhalations so soon as the pains are over, and again administer them on their recurrence. In this way I continue throughout the whole labor, administering chloroform only during contractions.

The state of agitation and anxiety is succeeded thus by a condition of calm and comfort, in a contrast which is heightened by expressions of the liveliest gratitude on the part of the patient. When the head has reached the perineum, and the moment of agony has arrived, there need be no fear nor hesitation to again inject, this time with one-half cgr. morphia, which is sufficient now to render supportable—at times, indeed, to absolutely nullify—the atrocious pains of passage. The analgesia thus induced, moreover, diminishes in marked degree the extreme fatigue incident to severe labor.

I have notes of a case of pelvic version in a trunk-presentation, practised more than sixteen hours after the escape of the waters, executed with the greatest facility under this condition of analgesia, the mother being so far conscious all the time as to be able to answer all questions addressed to her, uttering neither cry nor complaint.

The combined action of chloroform and morphia completely dissipates that tetanic contraction which renders version in these conditions so difficult and painful.

This condition of analgesia without anæsthesia may be easily maintained, if the precaution be adopted to frequently interrupt the inhalations of chloroform.

In a case of mixed anæsthesia induced for an amputation of the breast, I observed a considerable reduction of the pulse. It fell gradually from 100 to 54 in the minute. There was not the least danger throughout. Half an hour after the operation, the pulse slowly increased to 80 per minute.

QUINIA AND DIGITALIS IN HEMICRANIA.—M. Debout (*The Practitioner*, February, 1872; from the *Journal de Médecine*) has obtained favorable results from the combination of quinia with digitalis in the treatment of migraine. The formula he employs is: sulphate of quinia, forty-six grains; powdered digitalis, twenty-two grains; syrup, q. s.; to be made into thirty pills, of which one is to be taken every evening. M. Gauchet states that he also has had frequent opportunities of treating hemicrania in this manner. In old-standing cases it is occasionally ineffectual. He obtained the best results in those cases where the attacks occurred at the menstrual periods.

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EDITORIAL.

THE INTERNATIONAL OPHTHALMOLOGICAL CONGRESS.

THIS meeting, to which several delegates have gone from this city, took place in the Hall of the Royal College of Physicians, Pall Mall, London, on the 1st, 2d, and 3d of the present month. The German Ophthalmological Society has joined in it, dispensing with its regular annual meeting at Heidelberg in September. It was at the last session of this society that Mr. Critchett, of London, suggested the idea of an International Congress.

The German society was the parent-stem of all the other European ophthalmological societies, and owed its existence to the personal influence of Von Graefe, whose friends used to take advantage of his annual visit to Heidelberg to meet him there. The purely social character of these reunions gave way to a more formal organization.

The following account of the meetings of the society is taken from a letter from a friend:

"I well remember the one I had the pleasure of attending, now four years ago. Probably forty members were present, comprising the most noted oculists of Europe. Graefe was not there. Several severe hemorrhages had so weakened him as to make absolute quiet indispensable, and in the country for weeks he had been endeavoring to regain his lost strength. The first act of the Society, on assembling, was to send a telegram to him expressive of the sorrow felt by all at his absence. In a few hours came the answer, in which, after greeting the Society, he went on to communicate some new observations he had been making during the last few days before his sickness. This was the last communication he ever sent to this Society. Renewed hemorrhages shortly ended the life of one so hard to spare.

"It is the custom of this Society to hold two sessions daily, the morning one lasting from ten o'clock A.M. until one P.M., at which time dinner is provided at the 'Hotel Schnieder,' where, at one long table, the members engage in most friendly intercourse. The afternoon session is from four to six o'clock; after which, supper is provided in the Old Castle Garden, pleasantly situated on the hill above the town. Here the evening is passed in chatting, smoking, and listening to the band of music.

"The second day is very much as the first. Each member is required to have a written statement of what he may wish

to communicate for subsequent publication in the *Klinische Monatsblätter der Augenheilkunde*.

"The charm of this Society consists in the great friendliness and cordiality shown by the members to each other, making it to resemble very much a social gathering of friends; and perhaps a remark Dr. Pagenstecher made to me will convey the idea better than I can: 'During the entire year my thoughts are constantly turned to the 2d of September, when I make my trip to Heidelberg to be present at the meeting of the Society; and, as soon as it is over, I am looking forward with greater and greater longing to the time of the next one.'"

THE STOKES TRIAL.

AS a general rule, the medical profession appears to but small advantage in courts of law; but it seldom offers so sad an exhibition of petty personal malice and disgraceful wrangling as on the recent occasion of the trial of Edward S. Stokes for the murder of James Fisk, Jr., in New York.

According to the reports published in the daily papers, Dr. J. M. Carnochan, being called as a witness, took the opportunity to attack the character of Dr. Lewis A. Sayre, who had attended Fisk after the shooting, and who was called for the prosecution. Dr. Sayre, perhaps not unnaturally, but certainly at a great sacrifice of personal and professional dignity, retaliated with vigor when his chance came. Other medical witnesses gave testimony of a curiously conflicting character, and the upshot of the matter was that all the medical evidence was very properly thrown out, the question turning on the proof of the shooting being done in self-defence.

We can conceive of few graver or more responsible positions in which a man can find himself, than on the witness-stand, as a medical expert, in a trial for murder. Such was Dr. Carnochan's relation to the Stokes case; and yet he seems to have forgotten everything except the chance that offered itself for him to attempt to injure a rival practitioner.

The legitimate and inevitable result of such displays is that the whole medical profession loses in the public esteem, and quackery of all kinds must gain in proportion. They would be impossible, if medical men duly realized the dignity and importance of the trust confided to them as a body, and if each felt his own responsibility for the upholding and guarding of it.

HOUSE-COOLING.

THIS subject—the artificial lowering of the temperature of our dwellings during the intense heat of summer—has lately attracted much attention from writers in the daily and weekly papers. A correspondent of the *Philadelphia Press* says,—

"There is now in successful operation at No. 420 South Delaware Avenue, in the warehouse of the Messrs. Flanagan, a method of cooling or refrigeration which has been demonstrated to be of practical utility.

"It is cheap, as well as effectual for the purposes to which it is devoted, and may be applied with equal success to the

cooling of dwellings, hospitals, and sick-rooms. In fact, it is but reversing the present mode of heating, and instead of distributing caloric by means of pipes and registers through the different apartments of a house, to warm them, it is only required to drive currents of cold air from a body of ice by means of fans, and thus reduce the temperature at will to any degree required for comfort.

"At the warehouse above referred to, and at the Continental Hotel, for three years past, this method of refrigeration has been in constant and successful use. Meats, fruit, vegetables, and all other perishable articles of food, are kept indefinitely in prime condition. The atmosphere of these rooms is cold, pure, and dry as the air of Northern Minnesota in December. During this heated term we are now experiencing, the thermometer in these apartments has indicated a uniform temperature of 40°, whilst outside it has averaged almost 90°; and this has been accomplished with but a small consumption of ice in comparison with the ordinary style of refrigerators."

Our belief is that the desired end may be gained very cheaply, without so complicated and expensive arrangements as pipes and registers; especially as the extremely hot weather seldom lasts more than a few days at a time, and during the latter part of the summer the nights become quite comfortable. A very simple and inexpensive machinery would drive a fan, sending a current of air through a box containing ice, the whole fixed near the ceiling of the room to be cooled. Such an apparatus could be so arranged as to be taken down and put up with very little trouble. Experiment only could determine the degree of force and the quantity of ice required, the best position for the apparatus, and its exact cost.

AN ADMIRABLE CHARITY.

THERE is now in operation at Atlantic City an institution for sick children,—a sort of seaside appendage to our town hospitals. The plan, which we need not say had been already adopted in England, was talked of last year, and this summer, under the fostering care of Mr. James S. Whitney and others, has been carried into effect. The house is fitted up for the reception of sixteen children, the Children's Hospital being entitled to four beds constantly. It was opened, with eight inmates, on the 27th of June, and the number is now filled up. Each child is retained two weeks, or longer if specially provided for; the board charged is \$4 per week. By arrangement with the railroad company the children are carried from town at the trifling cost of thirty-seven cents; seventy-five cents being charged for an attendant.

Dr. Franklin D. Castle, the physician in charge, may be applied to for the admission of patients either at his office, 247 North Fifth Street, from 11.30 A.M. to 1 P.M., or at the institution, corner of Pacific and South Carolina Avenues, Atlantic City, after 6 P.M.

Among the patients who have derived marked benefit were four cases of hip-joint disease, one of chorea, one of club-foot, one of necrosis of the tibia.

We need scarcely urge the claims of a charity of so obvious merit, but would say that, from personal in-

spection, we are satisfied that those in charge of it are faithful, earnest, and experienced. It is to be hoped that means will be furnished for enlarging its scope, so that its benefits may another year be extended to a larger number of suffering little ones.

CUNDURANGO.

IT was not the curing of cancer, but it was the obtaining of a profit of somewhere about 1900 per cent. (\$38.00 per pound on an article costing not \$2.00 per pound), that animated the advocates of cundurango. The bubble has, however, been pricked; and we presume that Messrs. Bliss & Keene, more in sorrow than in anger, watch the fading glories of their great specific. They are making a feeble stand, or some one is trying to do so for them, on its antisyphilitic powers; this will perhaps work off the stock they have on hand, but it will hardly do more.

One point of curious dissimilarity may be noticed between the medical history of this article and that of its analogue, sarsaparilla: viz., the comparatively short time required for the explosion of the claims of the former. The explanation is undoubtedly to be found in the free and constant reports of the results of experiment all over the world, which modern means of communication alone could render possible. Sarsaparilla held its own in country neighborhoods, retired towns, and remote places, long after it had been tried and found wanting at the great centres of medical science. Cundurango is known as a stupendous failure wherever it is known at all.

HEAT AND CRIME.

WITHOUT any exact statistics on the subject, it seems to us that the "heated term" each year brings with it a great increase, in the cities, of crimes of violence. And it is not very difficult to account for this fact, if such it be. Men are more thirsty, and they drink more; they are out on excursions of all sorts, where liquor is apt to pass freely; they and their families, driven by the heat and closeness of their homes into the open air, are brought into nearer contact with their neighbors, and quarrels are apt to arise.

But, besides these circumstances, there seems to be a tendency in long-continued heat to demoralize the population; the discomfort of the body and the relaxing and enervating influence of the atmosphere engendering an irritability which has shown itself not only in crimes by individuals, but in riots. The worst of these public disturbances within our recollection have occurred during the summer season.

THE property of the University of Pennsylvania, at the corner of Ninth and Chestnut Streets, has been selected as the site of the new Post Office building, which will necessitate an early removal of the Medical Department to West Philadelphia.

A CRITICISM ON DR. PEUGNET'S VIEWS IN REGARD TO VERATROIDIA AND VIRIDIA.

BY H. C. WOOD, JR., M.D.

IN the *Medical Record* of May 1, 1872, is an exceedingly interesting paper, by Dr. Eugene Peugnet, upon the alkaloids of veratrum viride and veratrum album. In the first portion of this paper the author gives an almost unique history of a case of poisoning by veratrum album, also various extracts from and discussion of the literature of the subject. It is, however, only of the original, experimental portion of the essay that I desire here to speak.

This part of the memoir the author commences as follows:

"Chemistry, by the experiments of Richardson and Scattergood, reveals that they possess one alkaloid in common, the veratroidia; by Simon, the existence in veratrum album of a second alkaloid, the jervina.

"Bullock's experiments establish the difference between veratroidia and veratria; also demonstrate the existence of a second alkaloid, the viridia in veratrum viride; whilst by mine it fully confirms the identity of the veratroidia in both, and further reveals that the jervina of Simon and viridia of Bullock are probably identical; also that the essential difference resides in their resin, and that the resin of veratrum album contains an active principle, not of basic origin, which does not exist in veratrum viride."

It has been hitherto held by nearly all chemists that the officinal veratria was identical with the alkaloid of veratrum album; and it is therefore much to be regretted that Dr. Peugnet did not speak more definitely as to the nature of the evidence upon which he relies. If he rests his decision upon chemical investigations, he should say so more plainly, and by all means give the distinctive tests.

Dr. Peugnet then details a number of experiments upon animals, which he considers conclusive as showing the identity of the two alkaloids of veratrum album and veratrum viride. These experiments do not seem to me, however, sufficient to prove such identity. There are a number of the so-called heart-alkaloids whose actions are very similar, and yet, when closely examined, quite diverse. In the nine experiments detailed there is no sufficient balancing or equality of conditions to allow a decision as to the relative strengths of the two alkaloids (veratroidia alba and veratroidia viridis). Further, no symptoms were noted except the grosser and more apparent ones, and yet there seem to be differences in the results of the poisoning by the two alkaloids. Thus, veratroidia alba in most of the records is spoken of as freely purging, and also as causing salivation, whilst no such symptoms are anywhere detailed as having been caused by veratroidia viridis.

In order to establish identity of alkaloids through physiological experimentation, the latter must certainly be much more thorough than the work detailed. Whether the assertion of Dr. Peugnet that these alkaloids are identical be or be not correct, he certainly fails to establish its truth.

A most curious blunder occurs in this connection, where I am made to prove that the "peculiar action on the alimentary canal is through the pneumogastric nerve; for there was no vomiting and purging, except in the animals in which he had not divided the pneumogastrics." Every reader of the *American Journal of the Medical Sciences* knows that I published in it some months since an elaborate series of experiments which absolutely disprove such deductions.

Dr. Peugnet next details a number of experiments with viridia, from which he deduces the following conclusions:

"As to its action on the circulation, the results were almost if not entirely imperceptible; it had a slight action on the respiration, but its action was more decided on the temperature; however, none sufficiently pronounced to warrant its recommendation as a therapeutical agent.

"Its action may be summed as follows:

"I. It is not locally irritant.

"II. It has no decided action on the alimentary canal.

"III. It exerts no direct influence on the brain; although there is occasionally a slight contraction of the pupil.

"IV. It is not a spinal motor depressant, but a spinal motor excitant; in large doses producing on animals effects similar to small doses of strychnine."

Of these conclusions, those which differ from my own are as to the action of the drug on the circulation and spinal nervous system. In regard to the latter, there is no doubt but that Dr. Peugnet and myself both witnessed the same phenomenon,—one interpreting it as the result of sedation, the other of stimulation.

I cannot perceive any reason for altering my views formerly expressed; nor can I understand on what grounds Dr. Peugnet insists that the convulsions of viridia-poisoning are from over-stimulation, whilst those caused by veratroidia are from sedation: they being both accompanied with marked paralysis, and also very similar in all their concomitants.

In regard to the circulation the matter is not so clear, for in Dr. Peugnet's experiments there was apparently no slowing of the pulse. I can only say that the experiments were few in number, that in most of them there are records of violent convulsions and other evidences of reasons for increase of the pulse-rate, and that in no case was a close study of the circulation made, the doctor not using the cardiometer.

In order to account for the marked depression of the circulation witnessed in my experiments on viridia, Dr. Peugnet assumes that the viridia I used was contaminated with veratroidia, from which it obtained its sedative powers. It appears, however, easy to disprove this by his own statements and admissions. Thus, he says,—

"Scattergood, Percy, and Oulmont found that the exhausted resin of veratrum viride possessed a greater sedative action than the veratroidia. Percy called it resinoid, because he thought that it was a complex body, containing a distinct alkaloid. Wood, also, found that the viridia of Bullock possessed a similar power."

Here there is a series of authorities all agreeing that even viridia much contaminated with inert resin is

much more of a circulatory sedative than veratroidia; from whence it follows that Dr. Peugnet's conclusion is incorrect, unless we agree that the less is more than the greater.

There can be no doubt but veratrum album and veratrum viride are very different in their action upon man and animals; and Dr. Peugnet believes that the difference is due to the resinoid of veratrum album, to which he attributes the characteristic effect of the latter plant upon the alimentary canal. In his experiments with the resinoid it certainly did act powerfully both upon the alimentary canal and the nervous system; but the long experience with the resinoid of veratrum viride should surely lead to caution in the judgment that the resinoid (veratrum album) which he used was free from alkaloidal principle.

CORRESPONDENCE.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

DEAR SIR,—The remarks in your last issue in regard to the public baths struck me as appropriate and well-timed. I would, however, go still further, and urge that the city authorities, in forbidding the use of the rivers for swimming purposes, have cut off the only chance of many of our boys, who cannot afford to get tickets to the Natatorium, for learning or practising that most useful and valuable exercise, with all its hygienic bearings.

Why could not certain limits be set, within which it should be unlawful for men or boys to swim? or certain hours? So impressed am I with the importance of a knowledge of swimming, that I should be in favor of public instruction in that art, even if my already heavy taxes were increased to pay for it.

I am, etc.,

N. R. D.

PHILADELPHIA, August 10, 1872.

PROCEEDINGS OF SOCIETIES.

AMERICAN OTOLOGICAL SOCIETY.

THE fifth annual meeting of the Society was held at the Ocean House, Newport, R. I., on Wednesday, July 17, at 11¼ o'clock.

In the absence of the President, Dr. Morland was chosen Chairman.

Present—Drs. W. W. Morland, of Boston; Frank W. Abbott, of Buffalo; H. L. Shaw, of Boston; O. D. Pomeroy, of New York; C. J. Blake, of Boston; J. Orne Green, of Boston.

Drs. J. Solis Cohen, Charles H. Burnett, and Geo. Strawbridge, of Philadelphia, were elected members; and Drs. Cohen and Burnett took their seats.

The Chair appointed Drs. Pomeroy, Abbott, and Shaw as an Executive Committee.

The Treasurer's report was read and accepted.

Notice was given of a proposed amendment to the first Section of the By-Laws.

The Executive Committee reported the following bulletin of communications, which were read in order and referred to the Publishing Committee:

1. Report on the Progress of Otology. Dr. C. J. Blake, of Boston.

2. Accidental Evulsion of the Membrana Tympani and Ossicles of Hearing. Dr. C. H. Burnett, of Philadelphia.

3. Clinical Contributions: Otitis Media Hæmorrhagica. Dr. D. B. St. J. Roosa, of New York.

4. Peculiar Case of Impacted Cerumen. Dr. Roosa, of New York.

5. The Examination of One Hundred Cases of Impacted Cerumen, with a View of Determining its Pathological Indications. Dr. O. D. Pomeroy, of New York.

6. A Case presenting a Mastoid Sequestrum. Dr. O. D. Pomeroy, of New York.

7. A Faucial Eustachian Catheter. Dr. O. D. Pomeroy, of New York.

8. Perception of High Musical Notes. Dr. C. J. Blake, of Boston.

9. A Case of Caries of the Meatus. Dr. C. J. Blake, of Boston.

10. A Middle Ear Minor. Dr. C. J. Blake, of Boston.

Verbal Communications.

11. Remarks on a Late Publication in which Corpulence is considered a Cause of Deafness. Dr. W. W. Morland, of Boston.

12. Cases of Injury to the Ear from External Violence: six of Injury from Explosions, three of Injury from Blows, two of Injury from Attempted Removal of Foreign Bodies.

Notice was given of a proposed amendment to the fourth Section of the By-Laws.

After the reading of the eighth paper the Society adjourned, at 2¾ o'clock.

Second Session.—Agreeably to adjournment, the Society met at 4½ o'clock, and the minutes of the first session were read and approved.

The reading of the papers was then concluded.

The following officers were duly elected for the ensuing year:

President, H. D. Noyes, M.D.

Vice-President, E. L. Holmes, M.D.

Secretary and Treasurer, J. Orne Green, M.D.

Publishing Committee, Charles E. Hackley, M.D., R. F. Weir, M.D.

Com. on Progress of Otology, C. H. Burnett, M.D.

The amendment to the first Section of the By-Laws proposed at the first session was then adopted, and three was substituted for five as the number to compose the Committee on Nominations.

The other amendment proposed at the first session was then adopted, viz.: at the end of the first paragraph of the fourth Section these words were inserted: "And any member neglecting to pay the annual assessments for three years shall be considered to have forfeited his membership."

The same rules in regard to assessments, the revision of proofs, and adjournment, were adopted as last year.

The minutes of this session were read and approved, and the Society adjourned at 6¼ o'clock, P.M.

J. ORNE GREEN, *Secretary*.

REVIEWS AND BOOK NOTICES.

A TREATISE ON DISEASES OF THE BONES. By THOS. M. MARKOE, M.D., Surgeon to the New York Hospital, etc., etc. New York: D. Appleton & Co., 1872. Pp. viii., 413.

Dr. Markoe has been surgeon to the old New York Hospital—now, alas, no more!—for twenty years. He dedicates his volume to his colleagues; and a rare set of professional men they must have been, and must be, since all that score of years, though "illustrated by a thousand tokens of friendship and confidence," were "unmarred by a single cloud of estrangement, unbroken by a single hour of distrust."

The book is divided into three sections: 1. Ordinary diseases of bones; 2. Tumors; and 3. Malignant diseases. To the first part, about one-half, of the book is given a prominence, growing out of the natural relative frequency of such disorders. No one can read Dr. Markoe's descriptions of the pathology and symptoms of the various diseases he is called upon to treat of without seeing that he has been a close observer and diligent student. As a prominent example we may quote the chap-

ter on "Chronic Sinuous Abscess of Bone" (pp 33-45), and especially the differential diagnosis between this affection and necrosis, and its treatment. Common sense and professional (*i.e.* educated) sense mark every line. So, too, in the treatment of osteo-myelitis, his opposition to Mr. Longmore's views of the pathology and dilatory treatment of this formidable disease we believe to be eminently just.

Judging from his chapter on Rickets, it is to be presumed that he had not seen the valuable papers of Dr. Parry (*Amer. Jour. Med. Sci.*, Jan. and April, 1872) on this disease. But as his preface is dated March 6th, it is entirely a pardonable oversight, especially as to the later paper. Had his attention been called to it, we suspect he would have had reason to confirm Dr. Parry's conclusions as to the much greater frequency of rickets in this country than has been heretofore believed.

While we do not notice anything that is particularly original in the book, either in the scientific or practical portions, we can particularly commend it as eminently careful and sound. The most modern views are evidently familiar to the author; he has gathered his knowledge from many quarters, and contributed freely of his own large experience.

We notice among the engravings—which, by the way, are particularly good—very many from specimens in the New York Hospital museum. We hope it may impress upon the officers of some of our younger hospitals the propriety of beginning at once to form museums of both medical and surgical specimens and photographs, rather than let them be dispersed, and in many cases lost, by their being taken by the members of the staff. Among so many good drawings we were sorry to miss the admirable diagrams of necrosis given by Billroth, which could have been well substituted for figs. 20 and 21. No one could recognize Fergusson's lion-forceps in fig. 88. We would call attention, on p. 332, to an admirable saw devised by Dr. Goodwillie for resection of the jaw without external incision. We observe also that the description of the minute changes in caries (pp. 100, 101) from Barwell, is illustrated apparently by a drawing from Billroth, whose drawing illustrates in the original a very different pathological view of caries. Dr. Markoe's style is in general so good, that it is with regret we see *pubis* written for *pubes* twice on a single page (64).

HISTORICAL STEPS OF MODERN MEDICINE. By HENRY DAY, M.D. An Address delivered at the Annual Meeting of the St. Andrew's Medical Graduates' Association, 1872. Pp. 23.

The author of this brief but interesting address succeeded Dr. B. W. Richardson as presiding officer of the Association of St. Andrew's Graduates. He is or should be well known to our readers as the author of a recent volume of "Clinical Histories," which are refreshing not less for the pleasant style in which they are stated than for the originality and thoughtfulness of the writer's comments. As a provincial physician of the highest reputation, Dr. Day's studies have naturally been rather at the bedside than in the laboratory, and it will therefore repay us to see what a man so placed looks upon as "Historical Steps"—that is, true advances—in medicine, secured in our own time. It is to be remembered that he does not present under this heading only what are accepted gains, but such as—whether fully recognized or not—seem to him to be the most truly valuable. In tracing his record we must of necessity be brief.

He puts first, as a clear modern gain, the great structure of normal and morbid histology, as to which there need be no dispute. His next would have presented itself to but few medical men, and yet, in speaking of animal dialysis as of vast value, he is no doubt correct. In a terse sentence or two he sums up Graham's discoveries, and points out that it is impossible to study to-day any function, either in health or disease, without regard to the colloids and crystalloids. As yet we have benefited little by the principles which Graham so suddenly threw into the older physiology. They are in truth too all-embracing and too startling to have been fully used as they must soon come to be.

After an honest sigh over the present state of nomenclature, and for the good time when we shall name diseases from their causes, he takes up for commendation the "study of disease by synthesis" as altogether modern. The triumphs in this direction, like the similar victories in the laboratory of the

chemist, have indeed been few, nor is the profession fully satisfied as to the most of such as are claimed. These are Dr. Day's examples: 1. The neurotic origin of diabetes; 2. The synthesis of cataract in one of its forms, the diabetic. As to this latter, we are sorry to say that no one has yet proved whether in diabetes the clouding of the lens is due to sugar directly or to the trophic disorders of the disease. This awaits in man one simple experiment: if the lens be opaque owing to sugar, when removed and plunged into water it will become transparent. 3. The series of discoveries as to epilepsy induced by section of nerves, etc. As concerns these, while important, they are really only steps toward much larger discoveries. We have some doubt, indeed, as to the true epileptoid nature of the attacks in animals described as such, especially since they fail of being produced in the higher quadrupeds. Dr. Day's beliefs as to the value of the modern views in regard to uræmic poisoning, or the knowledge of it, as a well-won modern advance, will scarcely be fully admitted by physicians, who feel that just now the whole subject of uræmia as a cause of convulsions is in a state of unpleasant confusion.

As to the value of the discoveries in regard to the function of the sympathetic, no one will differ with our author; but we are unwilling to admit with him that mere division of this nerve may create inflammation. Dr. Day has next some interesting remarks as to the temporary simulation of functional disorders brought about by nitrite of amyl, ozone, and the inhalation of dry oxygen, and then considers the lactic acid production of endocarditis. He points out that, while the chemical theory of rheumatism has failed, there is a probability that the acids generated owing to the disease may be the true parents of the heart-trouble. Like many others, Dr. Day is coming back to the neural origin of rheumatism, which was first advocated by the late Prof. John K. Mitchell.

The modern use of instruments of precision Dr. Day thinks a great advance; and so it is. The accuracy and confidence which the thermometer, laryngoscope, and ophthalmoscope, with the aids from chemical method, galvanism, etc., have brought into medicine, are but the small promise of what the future of a hundred years may bring about; and we fancy, indeed, that it will be worth while to return hither, to stand at the side of a physician in the year 1976, when they are having a second centennial, and see how he will go about making a diagnosis.

We have left ourselves no space to speak of what Dr. Day thinks are the true advances in surgery; curiously enough, although a doctor, and a good one, he has hardly a word to say as to modern therapeutics.

Dr. Day's address is to begin the new volume of St. Andrew's Medical Graduates' Proceedings,—always a pleasant group of thoughtful papers; but these and the many hospital reports make the scholar a little cross at this vast multiplication of books, and he longs for the time when everything shall be put into the journals, and he shall cease to be told, Ah! my dear fellow, in that last essay of yours you have failed to mention Jones' paper in the first volume of the Pekin Hospital Reports!

A SYSTEM OF SURGERY. By SAMUEL D. GROSS, M.D., LL.D., D.C.L. Oxon., Prof. of Surgery in the Jefferson Medical College, etc. Fifth edition. Philadelphia, H. C. Lea, 1872. 2 vols.: pp. xxviii., 1098; and xxviii., 1170.

No event could have more fitly followed the graceful honor of his Oxford degree than the appearance of the two splendid volumes of the fifth edition of Prof. Gross' well-known and widely-appreciated "System of Surgery." To the hundreds of students and practitioners who have made it the "man of their counsel" in many a trying emergency for years past, it is no slight praise to say that it is greatly improved as well as enlarged. In fact, in many respects the present edition is a new book. Every chapter has been revised. Nearly 450 pages of new matter—a respectable book of itself—has been added, together with many new illustrations; yet the price has not been raised.

The most important change that we have observed in looking over the work is the frank acceptance of the new pathological views on inflammation, on thrombosis and embolism, and on morbid growths. The student will find Cohnheim's discovery of but five years ago, with all its consequences, ac-

cepted and explained at length, together with the results of the labors of Stricker, Von Recklinghausen, Rindfleisch, Waldeyer, Virchow, and many others of that great German school of pathologists, who have overwhelmed the scientific world no less by the brilliancy than by the rapidity of their discoveries. The only defect, we think, is that in the chapter on inflammation the treatment is so entirely didactic. A difficult subject like this needs illustration, and a judicious selection—say from Billroth, Stricker, Rindfleisch, and others—would have facilitated the comprehension of the text, especially to the student.

We notice also the addition of a good, though brief, chapter on railway injuries.

The occurrence of vaccinal syphilis is accepted as an established fact.

In discussing the introduction of air into the veins as a cause of death, we observe an apparent oversight of the important researches of Robin, and especially of the monograph of Feltz of Strasburg. They have proved that the heart can and will contract when distended with any liquid or gas, and that death is due undoubtedly to capillary embolism of the pulmonary circulation by the small air globules.

The chapter on the eye shows also the able hand of Dr. Thomson, who has revised it and has added a section on refraction and accommodation. We observe that the fig. (143) of his own valuable optometer is incorrect, one of the holes at (4) being omitted.

A number of valuable illustrations from the Surgeon-General's reports are added.

Among the omissions we notice that no mention is made of the use of the hypodermic syringe by suction, instead of an exploring needle. Among errors, Kidder's batteries are spoken of as Skidder's (i. 478), and Gaiffe's battery as a "chloride of silver battery" instead of "bisulphate of mercury." Moreover, no mention is made of the best batteries yet made in this country, viz., those of Drescher and of the Galvano-Faradic Company.

But these are trifling faults. The work is a magnificent monument of patient, assiduous labor and of a mind comprehensive yet minute; a glory to American surgery; an inheritance to American students.

BOOKS AND PAMPHLETS RECEIVED.

A Manual of Qualitative Analysis. By Robert Galloway, F.C.S., Professor of Applied Chemistry in the Royal College of Science for Ireland, Author of "The Second Step in Chemistry," "The First Step in Chemistry," etc. From the Fifth Rewritten and Enlarged London Edition. With Illustrations. Small 8vo, pp. 402. Philadelphia, Henry C. Lea, 1872.

Thermic Fever, or Sunstroke. By Horatio C. Wood, Jr., M.D., Professor of Medical Botany and Clinical Lecturer on Diseases of the Nervous System in the University of Pennsylvania; Physician to the Philadelphia Hospital. Boylston Prize Essay. 12mo, pp. 128. Philadelphia, J. B. Lippincott & Co., 1872.

Diseases of the Throat: a Guide to the Diagnosis and Treatment of Affections of the Pharynx, Œsophagus, Trachea, Larynx, and Nares. By J. Solis Cohen, M.D., Lecturer on Laryngoscopy and Diseases of the Throat and Chest, in Jefferson Medical College, Philadelphia; Mütter Lecturer before the College of Physicians, Philadelphia; etc. etc. With 133 Illustrations on Wood. 8vo, pp. 582. New York, William Wood & Co., 1872.

The Physiology of Man; designed to represent the Existing State of Physiological Science, as applied to the Functions of the Human Body. By Austin Flint, Jr., M.D., Professor of Physiology and Physiological Anatomy in the Bellevue Hospital Medical College, New York; Attending Physician to the Bellevue Hospital; Consulting Physician for the Class of Nervous Diseases to the Bureau of Medical and Surgical Relief for Out-door Poor, Bellevue Hospital; Fellow of the New York Academy of Medicine; Member

of the Medical Society of the County of New York, etc. etc. Nervous System. 8vo, pp. 470. New York, D. Appleton & Co., 549 and 551 Broadway, 1872.

Address before the American Medical Association, Philadelphia, May 7, 1872. By David W. Yandell, M.D., President. 8vo, pp. 29. Louisville, John P. Morton & Co., 1872.

Annual Address delivered before the Medical Association of Central New York, June 18, 1872, by the President, B. L. Hovey, M.D., of Rochester; and An Essay on Asiatic Cholera, by W. S. Ely, M.D., of Rochester. 8vo, pp. 12. Rochester, Erastus Darrow, 1872.

GLEANINGS FROM OUR EXCHANGES.

CARBOLIC ACID PREPARATIONS.—The preparations of this acid (*Druggist's Circular and Chemical Gazette*, May, 1872) have been employed with satisfaction in almost every country by individuals and governments for purposes of disinfection and medicinal use. It would hardly be worth while to say anything in favor of carbolic acid, the properties of which are so well known, and the varied purposes to which it may be put are increasing daily; yet we may properly mention that its useful application is largely due to the efforts of C. Calvert & Co., who were among the first to prepare it, and who, after years of experiments, succeeded in producing as pure a carbolic acid as we may ever hope to see,—that is to say, an acid almost odorless, and in solution almost tasteless. Many of these preparations are imported into this country, and we will, for the convenience of druggists, shortly enumerate them.

There are five brands of this acid in the market, three being solid and two fluid, which are designated as acid number *one*, *two*, *three*, *four*, and *five*, and are distinguished from each other by differently shaped and colored bottles and labels. *One* and *two* have been evidently filled into the bottles while hot, and have crystallized on cooling; but *three* consists of crystals produced in different vessels and afterwards filled into the bottles. A *sixth* preparation, containing one part of the best medicinal acid to twenty parts of water, completes the list.

1. *Carbolic Acid No. 1, for Medicinal Use (internal).*—This acid fuses at 41° C., is soluble in twenty parts of water, nearly tasteless and odorless; it is free from water, cresylic alcohol and other phenols, and may be considered chemically pure. This acid is contained in flat white bottles, with a label printed in gilded letters.

This acid is also sold in the liquid form, containing one part of water to nine of acid, and may practically be considered as of the same strength as the crystallized acid.

2. *Carbolic Acid No. 2, for Medicinal Use (external).*—This acid is found in the same-shaped bottles as the former, but which have a bluish tint; it is also nearly pure, containing only a trace of cresylic alcohol, and in addition 2.6 per cent. of water. The labels on the bottles are printed in black. The acid melts at 34° C., and dissolves in 25 parts of water. It is completely soluble in glycerine, and this solution has been successfully employed for carbuncles, etc.: one part of acid to fifteen of olive oil may also be used.

3. *Carbolic Acid No. 3, for Disinfecting Purposes.*—This acid is contained in square blue bottles. It is employed altogether for disinfecting purposes, and contains about 5.5 per cent. of water, 2.3 cresylic alcohol and other phenols, and 92.2 per cent. of carbolic acid; it is soluble in from 40 to 50 parts of water.

4. *Fluid Carbolic Acid No. 4.*—This acid is contained in dark-blue bottles, and is employed for out-door disinfecting purposes, as, with the cheaper price, strength and quality decrease, and the odor especially becomes noticeable and objectionable.

5. *Fluid Carbolic Acid No. 5.*—This acid is sold in the same-shaped but lighter-colored bottles as the preceding one; its odor is stronger than that of No. 4 acid, and it is employed for disinfecting sewers, dunghills, water-closets, and such like places. The uses and methods of employing one and all of

these preparations are always found printed on the label of the bottle; the two latter preparations contain about 88 per cent. of impure carbolic acid.

6. *Solution of best Medicinal Carbolic Acid.*—This solution, mentioned before, contains one part of the purest acid to twenty parts of water. The bottle is the same as that of No. 1 acid, but the label is printed in black. It is recommended for external use in ulcers, as a gargle, a wash for the mouth, and for internal use in scarlet fevers, typhoid fevers, and choleraic diarrhoea.

Carbolic acid No. 4 and 5 is recommended for disinfecting purposes; one part of the acid may be mixed with forty parts of wet sand, and the mixture exposed in hospital-wards and sick-rooms; or one part of the acid dissolved in one hundred parts of water, to sprinkle floors with, and all other places it is desirable to disinfect.

LACTIC ACID IN DIABETES.—Dr. George William Balfour, in a paper read before the Medico-Chirurgical Society of Edinburgh (*Edinburgh Medical Journal*, December, 1871), calls attention to some observations of Professor Cantani, of Naples, on the use of lactic acid in diabetes, and reports seven cases of this disease in which he has employed it. Prof. Cantani believes that in diabetes the question is not so much one of increased production as of defective combustion of sugar; and this defective combustion, he thinks, depends upon the production of a morbid form of glucose, which he terms par-glucose. This is incapable of being transformed into lactic acid, and therefore cannot be burned, but is passed unchanged in the urine. The consequence is that the heat of the body must be maintained at first by the combustion of the albuminates and fats, and later in the disease by that of the patient's own tissues. He, in common with many modern pathologists, recognizes the liver as the organ mainly at fault in diabetes; and his treatment is partly directed towards giving it as complete a rest as possible by depriving it of its pabulum, which is accomplished by subjecting the patient to a rigorous meat-diet, thus reducing to a minimum the introduction into the system of sugar-producing substances, and partly towards arresting the waste and ultimate complete degradation of the body, by supplying a combustible agent in a quantity sufficient for the wants of the body, so that the fats may continue to be stored, and the body thus gradually brought back to its normal standard; and he hopes that this restoration of the healthy standard of the constitution, coupled with the prolonged functional rest to the organ affected, may suffice to prevent any relapse into its morbid condition, even after a return to the ordinary dietetic conditions of modern civilized life.

The combustible agent which Cantani has selected is lactic acid; and this he administers in doses of from 70 to 150 grains daily, diluted in from eight to ten fluidounces of water. An exclusive meat-diet is insisted upon; for drink he allows water, either plain or with a little of the purest alcohol; coffee, tea, and wine being prohibited.

His results have been somewhat surprising. In recent cases the cure is stated to be almost certain, and speedy; and even where an exclusive meat-diet is not persisted in, life is apparently prolonged, and many of the unfavorable results of diabetes are prevented, though the melituria is not arrested. The success which has been claimed for the treatment in which skim-milk is the exclusive article of diet is readily understood when we reflect that milk contains from three to six per cent. of lactic acid, which, under the influence of the caseous matter, becomes transformed into lactic acid.

PATHOLOGY OF OEDEMA.—The *British Medical Journal* of June 15 (*The Boston Medical and Surgical Journal*, July 11) has an article upon the pathology of oedema. It states that the influence of the nervous system over the production, as well as the removal and inhibition, of dropsies, was pointed out by Dr. Laycock, of Edinburgh, six years ago. His conclusions, drawn from clinical experience, have been confirmed by Ranvier and Goltz. Those of the former show how the nervous system may permit oedema to occur by allowing an excess of fluid to exude from the blood-vessels into the tissues; those of the latter explain the occurrence of oedema from insufficient absorption. The theory that oedema is due solely to venous obstruction is derived mostly from two experiments made by Lower about the year 1680. In one of these he found

ascites to be produced by tying the vena cava within the thorax of a dog; and, in the other, that ligature of both jugulars was followed by oedema of the parts above the ligature, and by increased tears and saliva. This theory received the support of Bouillaud in 1823, who described cases of local oedema resulting from thrombosis, and attributed its occurrence to clots in the interior of the veins preventing them from performing their absorbent function.

Ranvier obtained very different results from the repetition of Lower's experiments. Neither ligature of the jugulars nor of the femoral was followed by oedema. On tying the inferior cava, taking care not to injure or include the nerves, both legs became cold, but no oedema resulted. If, however, one of the sciatic nerves—which Bernard has shown to contain the vaso-motor nerves of the leg—was then cut, the cutaneous vessels of that leg dilated, the color of the limb became rosy, and it felt hot instead of remaining cold like the other. Within an hour oedema was noticed about the tendo-Achillis, and in twenty hours the leg had become intensely swollen. To show that this effect was due to division of the vaso-motor nerves of the leg, and not to the paralysis consequent on the division of the motor fibres of the sciatic, the experimenter divided the latter class of nerves and left the vaso-motor unharmed. There resulted complete paralysis of the leg, but no oedema occurred. These experiments seem to show that venous congestion alone is not sufficient to produce oedema. The experiments of Goltz, now to be mentioned, support the view that the oedema which followed the section of the nerve was due to an unusual amount of fluid being poured out from the dilated vessels.

Goltz rendered two frogs motionless by poisoning them with curare, and then destroyed the brain and spinal cord of one, while he left those of the other unharmed. He then injected a solution of common salt into the lymph-sac of each, and found that from the divided aorta of the one whose brain and spinal cord had been destroyed not a drop of fluid fell, though the hearts of both continued to beat, while from the other at first pure blood, then diluted blood, and at last a colorless fluid, flowed, and that just in proportion as the fluid which trickled from the aorta filled the vessel which was placed to collect it did that in the lymph-sac diminish. Having thus shown that destruction of the nervous system arrests absorption, he also found that when the nervous centres were stimulated the rapidity of absorption was much increased.

In some additional experiments, he found that destruction of the nervous system allows fluid to exude more easily from the vessels, as well as hinders its absorption into them. This result coincides with those attained by Ranvier.

"The absence of oedema in one person and its presence in another, without any difference in the amount of venous congestion in the cases, as well as its occasional occurrence in an individual without any increase in the congestion being perceptible, are readily explicable in the light of the facts proved by Ranvier and Goltz, that congestion alone does not produce oedema as long as the vaso-motor, or rather absorbent, nerves are active, but does so as soon as their power is lessened or destroyed." The retention of urinary products in the blood is a source of irritation to the vaso-motor centres, and in cases of renal disease where this retention occurs we might predict, what clinical experience shows to be true, that oedema would not occur. "We should also expect that the application of any irritation to the vaso-motor centre, such as might be produced by pressure, would cause the absorption of dropsical fluid already effused; and this centre being situated within the cranium, the concurrence of cerebral symptoms with the disappearance of oedema thus becomes readily intelligible."

CEREBRO-SPINAL MENINGITIS.—Dr. Borland, in the *Boston Medical and Surgical Journal*, reports a successful result in a very severe case of this disease, in which the treatment consisted mainly of fluid extract of ergot, with bromide of potassium in full doses, nourishment, and stimulating fomentations. On the eighth day a purge of calomel and jalap was given. The ergot and bromide were stopped on the twentieth day, and quinine substituted. On the twenty-sixth day the quinine was omitted, and he was put on the syrup of the hypophosphites of lime, soda, potash, and iron.

Dr. N. S. Davis, of Chicago (*N. Y. Medical Record*, July 15; from *Chicago Med. Examiner*), uses in this disease the

Calabar bean, either with or without the addition of ergot. He believes that such remedial agents as have the power to diminish excitability, and at the same time to increase the vascular tonicity, exert the most favorable influence over the active stages of its progress. Such are the Calabar bean, cannabis indica, gelseminum, ergot, etc. In the active stage of the disease he has not found either opiates or quinine to produce any favorable effects.

DR. S. C. BUSEY, of Washington, D.C., reports, in the *National Medical Journal*, a case in which a girl six years of age ate, on the 8th of November, some "chicken-grapes." Two days after, Dr. B. was called to see her, and found a mass of the grape-skins and seeds impacted in the rectum. Other means failing, and a tendency to colitis showing itself, on the 12th Dr. Busey removed the whole mass, about a pint, with his finger and a scoop-director. The operation was followed by very slight bleeding, and by some pain; but the child was playing about the same afternoon, and recovered without any bad symptom.

An older sister of this child had also eaten very heartily of the grapes, and a similar accumulation had taken place; but she discharged the mass by a voluntary effort.

VAPOR OF AMMONIA IN HOOPING-COUGH.—Mr. John Grantham states in the *British Medical Journal*, that in cases of whooping-cough in the last stage (that is, after the third week) he has had one ounce of the strongest liquid ammonia put into a gallon of water in an open pan, and the steam kept up by means of half a brick made red-hot throughout and put into the boiling water containing the ammonia, the pan being placed in the centre of a room, into which the patients were brought as the ammoniated steam was passing off. "This method was used in the evening, just before bedtime; and it has been so efficacious," he says, "in abating the spasmodic attack, and after three or four days terminating the malady, that I cannot over-estimate the great value of this mode of inhaling the ammonia as a therapeutic agent in tranquillizing the nervous system in whooping-cough."

CINCHONA CULTIVATION AT ST. HELENA.—The British government has established a cinchona plantation at St. Helena, at an elevation of twenty-six hundred feet above the sea. The *London Journal of Botany* states that there are now nearly one thousand trees in a fine healthy condition, the tallest between seven and eight feet above the ground. The nature of the land forming the plantation is very steep and rugged. The entire cost of the trees, exclusive of the superintendent's salary, is about \$1.50 each. Plantations of pines and other valuable timber trees have also been established, and efforts are making to introduce the cultivation of tobacco and Guinea hemp (*Sarcococa guineensis*); the latter is valuable for its fibre. The superintendent is training up a number of apprentices with a view to their being ultimately useful in the island, where the arts of horticulture and arboriculture have been much neglected.

SMALLPOX IN LIVERPOOL.—In his report on the health of Liverpool during the year 1871, Dr. Trench, the medical officer of that town, gives some interesting statistics in illustration of the influence of vaccination in mitigating the fatal effects of smallpox. Among 1616 patients treated for the disease, the deaths of the unvaccinated and of those in whom vaccination was doubtful were at the fearful rate of 56.4 per cent.; the deaths where one cicatrix was visible, on the other hand, were only 14.9 per cent.; where two cicatrices were visible they fell to 9.8 per cent.; while where three cicatrices were visible they were as low as 7 per cent. Dr. Trench traces the importation of the disease to two Spanish sailors who died of smallpox in hospital in Liverpool in August, 1870. Before this there had not been a death from smallpox in the town since the preceding 1st of January. But these two cases were followed by an epidemic, which, commencing in the immediate neighborhood of the hospital, extended to almost every district of the town, and carried off 2093 persons. From his experience during this smallpox epidemic, Dr. Trench proceeds to show the necessity for enforcing the power granted by the Public Health Act of 1866 to nuisance authorities, to provide mortuaries for the reception of bodies dead of infectious diseases. In numerous instances Dr. Trench found families in single-room habitations, where the living were obliged to be, by

night and day, in the presence of the dead. "No language can be too strong to depict the horror of such a condition, its demoralizing effect on the friends of the deceased, and its intense danger to them and to the community. . . . Wakes were held over the dead in the overcrowded rooms, drunken persons lay down at night on the same bed with the corpses, and rose unwashed in the morning to mingle with the general population."

Under the circumstances, the only wonder is that the epidemic did not prove even more destructive.

CLAY-DRESSINGS FOR SMALLPOX.—Dr. E. S. Bunker, of Brooklyn, writes to the *Medical Record* that during the recent epidemic he used clay-dressings for two pretty decided cases of confluent smallpox. Both patients were young women. One, a married lady, æt. 23 (delivered on the second day of a six months' foetus), made a fair recovery, took cold after getting up, and in a few days died suddenly of empyema and pericarditis; diagnosis confirmed by autopsy. The other, single, æt. 21, had the disease with great violence, recovered rapidly, and is now well. In each case he dusted finely-sifted pipe-clay over the face as soon as the pustules became fairly developed. This formed immediately a clean, dry, wholesome scab; abolished the intolerable itching and burning; served apparently as a good absorbent of infectious material; and scaled off during convalescence, leaving underneath a soft, natural integument.

There was no disfigurement in either case.

TREATMENT OF PRURITUS VULVÆ.—Those who have had any experience in the treatment of this troublesome affection will learn with interest that Mr. McGrath states (*Canada Lancet*, November, 1871) that he has found the following, applied by means of a soft sponge after ablution, morning and evening, attended with the most satisfactory and speedy result:

- R. Biborate of soda, ʒij;
- Hydrochlorate of morphia, gr. xx;
- Hydrocyanic acid, ʒj;
- Glycerine, fʒj;
- Distilled rose-water, fʒviij.

ERECTILE TUMORS OF THE INTESTINES.—M. Laboulbène (*L'Abeille Médicale*, June 16, 1872) calls attention to the fact that there are but few reported cases of erectile tumors of the intestines. He refers to a case in which the existence of such a tumor was recognized during life, and says that—1, erectile tumors (angiomata) exist in the intestinal canal as well as on the surface of the skin; 2, these tumors are developed in the mucous membrane of the intestine; 3, they sometimes give rise to fatal hemorrhages.

MISCELLANY.

THE MEDICINE OF THE FUTURE IN JAPAN (*Med. Times and Gazette*, June 29, 1872).—The government of Japan, with a sagacity and foresight which promise well for her future position in the community of nations, has determined to lay the foundation of a good scientific medical school. For this purpose they have rightly chosen the city of Nyaka (or, as it is otherwise called, Kioto)—the residence of the Mikado—and there they will establish a complete medical school and clinical hospital, making use of existing temples and other public buildings till new buildings can be constructed. The model for the hospital is that of Leipsic, on the separate-pavilion principle. They directed their agent in Germany to select for them, as the head or director of the whole establishment, a German physician, whose qualifications and duties they defined with praiseworthy minuteness. He must be well versed in the theory and practice of medicine and the allied sciences, but above all must have seen plenty of practice, and not be a mere theorist or bookworm. He must understand English, and be able to lecture in that language, inasmuch as English

interpreters are more easily procured than others. He must learn the Japanese language, and be prepared to teach it, in due time. He must be well versed in chemistry and physical science, and be ready to give information when appealed to. He must be a man of good general education, good manners, and kind-hearted; must love children, and be just such a man as children would take to readily. He must not be pedantic, or like a drill-sergeant; and must be of temperate habits. He must be in good health, sound in wind and limb and eyesight; not finikin, or of artificial manners, but upright, straightforward, and spontaneously courteous; if he saw surgery in the late war, so much the better. Lastly, the Japanese instructed their agent to choose out of two candidates (all other things being equal) the *shorter*, because, as they are not a tall people, they would expect more sympathy from a man who was not tall himself. The duties of this physician are sufficiently ample and responsible. He has to superintend the erection of the hospital and school; to instruct a body of assistants who begin with some knowledge which they have acquired under the Dutch at Nagasaki, and of students who begin *de novo*; to teach science in general and medicine in particular; to treat the sick; and to lay the foundation of the medicine of the future at Japan. We must not fail to add that the arrangements proposed for remuneration are liberal and thoughtful in the highest degree, and do the Japanese government infinite credit. The task of selection was intrusted to the Professors of the University of Leipsic, and their choice fell on Dr. Junker, whose late essay on tracheotomy is well known to our readers. He is an M.D. of Vienna, M.R.C.S. England, and was attached to the Samaritan Hospital, from which he resigned on the outbreak of the late war, during which he served at Bazeilles, and was afterwards Surgeon-in-Chief of the German Hospital at Saarbrücken.

THE San Francisco *Bulletin* says, "The ingredients of a witch's caldron, as described by the poet, could not have been more repulsively disgusting than are the articles and compounds shipped to the Chinese physicians of this city from their native country, and used as medicines here. There seems to be just at the present time an extra demand for a venomous serpent closely resembling the rattlesnake, and of which hundreds are received constantly. A custom-house official brought a specimen of these cheerful-looking creatures to this office yesterday: a coiled snake about four feet long, fanged, and with hideous head-scales like a crest. How these animals are taken by patients of Chinese doctors is not known. One would be a fair dose if disguised in a coating of sugar. They may be taken in sections three times a day, as they are desiccated, or they may be boiled down or pulverized, and taken in powders or rolled into pills. Lizards are in nearly as great demand as the snakes. These also are dried and sent over in packages, together with hundreds of other loathsome things, all of which are consigned to the Chinese physicians and used by them in their practice."

THE GERMAN HOSPITAL.—At the last stated monthly meeting of the Board of Managers of the German Hospital of the city of Philadelphia, the subject of the dilapidated condition of the present buildings upon the grounds of the corporation, at Twentieth and Norris Streets, was considered. The present buildings, in which there are at this time thirty-nine patients, will barely answer during the present season, and the direction finds itself compelled either to seek a new locality or commence without further delay the erection

upon the grounds now occupied by them, in the square between Nineteenth and Twentieth, Diamond and Norris Streets, of a suitable edifice for the purpose. The cold season cannot be permitted to approach without superior accommodations being provided for the inmates of the institution, for which purpose an appeal will be issued to the charitably and humanely disposed.

On the 7th of August a festival was held by the Ladies' Aid Society of the hospital, at the Schützen Park, in aid of the building fund. Music was furnished by the Schützen Liedertafel, and a great many persons were present during the day. The sum realized is said to have been quite handsome.

DONATIONS AND BEQUESTS.—The will of the late S. F. Pratt, of Buffalo, N.Y., contains a bequest of \$10,000 to the General Hospital in that city, payable January 1, 1880.

Mr. S. P. Wetmore, of Newport, R.I., has given \$1000 to the Newport City Hospital.

The late William S. Rogers, of Boston, bequeathed \$50,000 to found a professorship of chemistry in Brown University, at Hartford, Conn., to be known as "The Newport Rogers Professorship."

The Clinic, of Cincinnati, quotes from the *Wiener Med. Presse* of June 30, 1872, a statement that the Countess Seraphine Andrassy, who died recently in Pesth, left her entire fortune to the medical department of the University in that city. Some 30,000 florins are thus bequeathed, of which three-fourths goes to the College, and the remainder to the Children's Hospital.

THE LONDON HOSPITAL FOR SICK CHILDREN.—The corner-stone of the new building for the Hospital for Sick Children, in Great Ormond Street, Bloomsbury, London, was recently laid by the Princess of Wales. The plan of the structure is such that it will be put up in successive sections, as fast as the required money can be raised. This hospital was first put in operation in 1852, with ten beds; it now has seventy-five, and a Convalescent Home at Cromwell House, Highgate, capable of containing fifty-two inmates. Its benefits have been extended to 10,000 in-patients, and 200,000 out-patients, in the twenty years of its existence.

THE new buildings of the Hôtel-Dieu, in Paris, which were approaching completion when the war broke out, will, it is hoped, be finished without further delay under the auspices of the Conseil Municipal. The Hôtel-Dieu, which is just opposite the Cathedral of Notre Dame, is the oldest of all the Parisian hospitals, having been founded by St. Landry, a Bishop of Paris, in the fourth century. It was partially destroyed by fire on two occasions in the course of the last century, and in the second of these conflagrations a number of the patients lost their lives. This hospital contains, or rather is capable of containing, eight hundred and twenty-six beds.

THE city of Leyden, Holland, has just inaugurated with great pomp a statue of Boerhaave, the great naturalist and physician, in presence of a vast multitude. A deputation from the Academy of Belgium attended, and the flags of that country were seen mingled with the Dutch colors. The monument is eleven feet eight inches high, and stands on a pedestal of ten feet from the ground. The deceased is represented in his professional robe, with a book in his hand, and seems to be either beginning or terminating a lecture.

A NEW DISPENSARY.—A new medical dispensary was organized and opened to the public of the southern section of the city, on Monday, July 15, at 1017 Morris Street, under the charge of Dr. Wm. H. Hutt, who is assisted by Drs. R. G. Curtin, C. L. Hart, H. F. Baxter, D. C. Mecune, George M. Reed, John Sterling, and W. F. Woolsey.

MONUMENT TO VON GRAEFE.—At the last Ophthalmological Congress, at Heidelberg, a committee was appointed "to worthily honor the memory of Albert von Graefe by the erection of a statue in some place in Berlin, near the scene of his clinical labors." The names of the committee are as follows:

B. Fränkel, Helmholtz, Von Langenbeck, F. Mendelssohn, Schweigger, Traube, Virchow, Waldeck, Wegscheider, of Berlin; Arlt, of Vienna; Alfred Graefe, of Halle; Donders, of Utrecht; Blessig, Junge, of St. Petersburg; Horner, of Zurich; Warlomont, of Brussels; Von Zehender, of Rostock; Quaglino, of Naples; Bowman, of London; Williams, of Boston, U.S.

GOVERNOR GEARY recently appointed the following-named gentlemen trustees of the State Lunatic Hospital: Traill Green, M.D., Easton; John L. Atlee, M.D., Lancaster; Daniel W. Gross, Harrisburg; George Bailey, M.D., Philadelphia; and Charles S. Miner, Esq., Honesdale, Wayne County. The commissions of the three first are for three years from February 7, 1871; and of the three latter for three years from February 1, 1872.

SPECIAL COMMISSIONER.—The Secretary of the Interior has appointed Dr. Parrish, of Philadelphia, a Special Commissioner of Indian Affairs, to visit the Kiowa Indians for the purpose of investigating the reported troubles among them, and to endeavor to get them to come within their reservations. H. E. Alvord has been appointed an assistant to Dr. Parrish, and will accompany him.

COLLEGE OF PHYSICIANS AND SURGEONS OF NEW YORK.—Edward Curtis, M.D., has been appointed Lecturer on Materia Medica and Therapeutics in this institution, *vice* Jas. W. Lane, M.D., transferred to the Adjunct Professorship of Obstetrics and Diseases of Women and Children. Charles F. Chandler, M.D., has been made Adjunct Professor of Chemistry.

LEGALIZED DISSECTION.—According to the *Boston Medical and Surgical Journal*, Michigan and Iowa have recently legalized dissection, and made provision for it by permitting physicians, medical societies, and colleges to claim for this purpose the bodies of criminals and paupers unclaimed by friends.

PRIZE OFFERED.—From the same source we learn that the sum of three hundred thalers (about \$215) has been placed in the hands of the medical faculty of Leipsic, to be awarded by them to the writer of the best essay on the therapeutical uses of chemically-pure beech-wood creosote, sent to them before March 31, 1873.

ST. BARTHOLOMEW'S HOSPITAL.—Lauderdale House, at Highgate, has lately been opened as a Convalescent Home for patients from this institution, with accommodations for thirty-four male inmates. A lease for seven years, rent-free, has been given by Sir Sydney Waterlow.

PROFESSOR TYNDALL has engaged passage for New York, and may be expected in October. He is to remain in this country six or seven months, lecturing in the principal cities.

We regret to hear of the death of Dr. Augustine H. Fish, of this city, at the early age of 44. Dr. F. was a man of retiring manners, but his unimpeachable honor and integrity, and his conscientious industry in professional duty, secured him the esteem and friendship of all who knew him.

DR. MOREAU MORRIS has resigned the position of City Sanitary Inspector of the Health Department of New York, which he has held since May, 1870.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending	
	July 27.	Aug. 3.
Consumption	33	37
Other Diseases of Respiratory Organs	8	17
Diseases of Organs of Circulation	9	13
Diseases of Brain and Nervous System	73	53
Diseases of the Digestive Organs	48	45
Diseases of the Genito-Urinary Organs	11	5
Zymotic Diseases	200	155
Cancer	9	11
Casualties	12	12
Debility	67	72
Old Age	19	19
Scrofula	2	0
Stillborn	12	17
Suicide	1	4
Sunstroke	9	1
Intemperance	0	1
Unclassifiable	14	15
Unknown	3	0
Totals	530	477
Adults	187	171
Minors	343	306

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JULY 19, 1872, TO AUGUST 4, 1872, INCLUSIVE.

RANDOLPH, J. F., SURGEON.—By S. O. 176, War Department, A. G. O., August 1, 1872, granted leave of absence for three months, on surgeon's certificate of disability.

HASSON, A. B., SURGEON.—By S. O. 143, Department of the East, August 2, 1872, granted thirty days' leave of absence.

TOWN, F. L., SURGEON.—By S. O. 141, Department of the East, July 29, 1872, granted thirty days' leave of absence, on furnishing satisfactory medical attendance during his absence.

GODDARD, C. E., SURGEON.—By S. O. 167, War Department, A. G. O., July 22, 1872, relieved from duty in Department of Dakota, and to report in person to the Commanding General, Department of the East, for assignment.

STERNBERG, G. M., ASSISTANT-SURGEON.—By S. O. 167, War Department, A. G. O., c. s., relieved from duty in Department of the East, and to report in person to the Commanding Officer, Department of the Gulf, for assignment.

SEMPLE, J. E., ASSISTANT-SURGEON.—By S. O. 167, War Department, A. G. O., c. s., relieved from duty in Department of the Lakes, and to report in person to the Commanding Officer, Department of the Gulf, for assignment.

JANEWAY, J. H., ASSISTANT-SURGEON.—By S. O. 122, Department of the Missouri, granted twenty days' leave of absence, to take effect from the date of his leaving Fort Hays, Kansas.

HORTON, S. M., ASSISTANT-SURGEON.—By S. O. 122, Department of Texas, July 15, 1872, assigned to duty at Fort McKavett, Texas.

WILLIAMS, J. W., ASSISTANT-SURGEON.—By S. O. 167, War Department, A. G. O., c. s., relieved from duty in Department of the East, and to report in person to the Commanding General, Department of Dakota, for assignment.

BARTHOLF, J. H., ASSISTANT-SURGEON.—By S. O. 68, Department of the Lakes, July 22, 1872, assigned to duty at Fort Niagara, N.Y.

KOERPER, E. A., ASSISTANT-SURGEON.—By S. O. 122, Department of Texas, c. s., assigned to duty as Post Surgeon at Fort Griffin, Texas.

O'REILLY, R. M., ASSISTANT-SURGEON.—By S. O. 122, Department of the Platte, July 20, 1872, granted leave of absence for thirty days.

CARVALLO, C., ASSISTANT-SURGEON.—By S. O. 164, War Department, A. G. O., July 18, 1872, granted leave of absence for fifteen days.

MONDAY, SEPTEMBER 2, 1872.

ORIGINAL LECTURES.

CLINICAL LECTURES

ON INHERITED SYPHILIS.

BY JOHN S. PARRY, M.D.,

One of the Attending Accoucheurs to the Philadelphia Hospital, etc.

LECTURE I.

GENTLEMEN: I shall call your attention this morning to inherited syphilis; a very important subject, because the disease is very frequent, is to be met with in all classes of society, is protean in its forms, and must often be recognized and treated under the most embarrassing circumstances. The moral and social questions connected with the disorder make it necessary for you to be perfectly familiar with its peculiarities, for the peace and well-being of families will often depend upon your decisions. See to it, then, that you are sufficiently well informed to furnish reliable and truthful opinions upon the subject. See to it that you do not hereafter disturb domestic happiness by untimely statements or errors in diagnosis.

This hospital is very rich in illustrations of this disease, and I shall avail myself of the opportunity of showing you some very interesting cases this morning; but I want to say in the beginning that I have not at present the material to illustrate all the different varieties of the disease, while the wards happen to be very well supplied with examples of some of the late lesions of the affection.

The history of the first patient whom I shall show you is as follows:

Case I.—J. W., æt. 2 months. In 1865 his mother had primary, followed by constitutional, syphilis, which she did not contract from her husband, who has always been a healthy man, and who was at that time away from home. She has had no severe tertiary manifestations. Her body is covered with scars of a previous skin-eruption, but she has not suffered from any acute symptoms for more than a year. Excepting with this child, she has not been pregnant since she contracted the disease.

He was born March 29, and at this time weighed nine pounds and two ounces, and appeared to be healthy in every particular. When two weeks old he began to suffer from "a cold in his head," and when four weeks old a mottled eruption appeared over his thighs and buttocks. This gradually spread to the trunk and legs. Since then it has never disappeared.

Present condition, June 4, 1872.—He appears to be fairly nourished, is quite fat, but his muscles are rather flabby. He is suffering from persistent though not severe coryza. The lips are not fissured. Over the forehead and upper part of the cheeks is a faint dark-colored mottled eruption. On the lower inner part of the cheeks and the chin the skin is "bistre-colored," or has the appearance of being stained by a solution of some dark-brown substance. The arms and upper part of the trunk are covered with obscure copper-colored spots. The eruption is best developed upon the buttocks and lower extremities, where there are numerous copper-colored, squamous spots, round or oval in shape, from a few lines to a quarter of an inch in diameter, and but slightly if at all elevated above the surface. The palms of the hands and the soles of the feet are perfectly healthy. There are no mucous patches anywhere.

His general health is moderately good, though he is rather irritable and suffers a good deal from diarrhoea, the discharges being green and mucous.

There are several points in this case that I hope you have noticed as I read the history. These are the fact that the disease has developed itself in an unequivocal manner in a child whose mother at the time of conception and during her gestation was not suffering from progressing constitutional syphilis; and the occurrence of coryza, followed by a scaly eruption, in a child who at birth was very healthy and weighed more than newborn infants ordinarily do. I remember seeing this boy in the wards the day after his birth, and, as I did not then recollect that the mother had had venereal disease, I did not think of his being infected by this poison. This is not an uncommon history; and you must not think that syphilitic children are always born with the marks of the disease upon them. On the contrary, the opposite is more frequently the case; and of the children that we see here, many of them appear to be plump and hearty at birth, and do not present that old, weazened appearance which has been described by some authors.

You have heard the account of the coryza by which he has been affected. This is one of the earliest, if not the very first, of the symptoms of the disease in a majority of the cases. It is likely to attract the attention of the mother at an early period, because coryza, which is of little importance in older children and adults, interferes so much with the nursing of young infants that in them it becomes very important, and demands the care of the physician. In this instance it has not been at all severe.

Certain important symptoms of congenital syphilis have not been developed in this child. In many or most cases of the disease, peculiar and very characteristic lesions of the mucous orifices follow the coryza of which we have been speaking, so that we often find it associated with linear fissures at the orifices of the nose, and upon the lips. These are comparatively superficial, have red bases, from which blood oozes, or they are covered with dry brown crusts. They radiate from the corners of the mouth, nostrils, and sometimes from the external angles of the eyes. When they are well developed and are associated with coryza, they form such a characteristic picture that the experienced physician can determine the nature of the affection at a glance. When these lesions have healed, they often leave permanent linear cicatrices,—a fact which it is well to remember, as these are so peculiar as to be very valuable in the diagnosis of late syphilitic manifestations, the nature of which may be doubtful. I say these symptoms have not been developed in this and some of the other children whom I shall show you.

The cutaneous eruption in this instance is squamous, and you see that it has a distinct copper hue. In addition to this, I ask you to notice the peculiar discoloration of other portions of the skin. You notice that the lower portion of the face especially is dark, and has a stained appearance. The peculiarities are not easily described, but the color has been compared to that of bistre, or staining from weak coffee. This appearance has been described by Trousseau (*Clin. Med.*, vol. iv., Philadelphia, 1871), who believes it to be pathognomonic of the disease which we are discussing. I consider it a most valuable sign; and, although it is imperfectly developed in this case, the appearance is sufficiently characteristic to lead an experienced physician to suspect this child to be the victim of congenital syphilis.

In some cases, instead of having a squamous syphilitic, such as is present in this child, the eruption consists of bullæ,—pemphigus, as it is termed in the books.

My own experience would lead me to conclude that this form of skin-eruption occurs in those cases in which the disease manifests itself very soon after birth.

It usually appears within a few days or weeks after the commencement of extra-uterine existence. My experience has also gone to show that it is only present in those cases in which the cachexia is profoundly developed; and, while pemphigus is a very important, it is not a very common eruption in inherited syphilis. Some authors have gone so far as to look upon all cases of infantile pemphigus as very suspicious, and as nearly always having a specific origin. Indeed, I am not sure but that a few good authorities say that it always has. I am very positive that this is not true, for it has been my fortune to meet with many cases of infantile pemphigus; and if I were to draw a conclusion from what I have myself seen, I would say that no variety of skin-disease is more frequent than this among children between one and fifteen months old. But I presume that my experience has been somewhat peculiar, for I have seen pemphigus sweep through the wards of this hospital, upon two separate occasions, almost like an epidemic. But at these times it presented well-marked and very important characters. The eruption was very constant in its seat, being located upon the neck, chest, and back, while it appeared but rarely upon the extremities, and, *if at all, never upon the palms of the hands or the soles of the feet.* This I conceive to be the important distinction between specific and non-specific pemphigus. The former in the majority of cases attacks the palms of the hands and soles of the feet, and is nearly always confined to these parts. If you meet with this bullous eruption limited to these locations in young infants, you are justified in suspecting that they are the subjects of inherited syphilis. According to my own belief, it would amount almost to a positive conclusion.

In certain rare cases, specific pemphigus first makes its appearance upon other parts of the body. I have met with a few such, and in all of them the disease existed at birth or set in immediately after it. In one instance it appeared upon the face at the end of the first twenty-four hours, and spread very rapidly. Of these infants, those who were born alive perished in a short time; and, indeed, out of all the cases of specific pemphigus which I have seen, I cannot now recall one who lived beyond a few months, while most of them succumbed within a few days or weeks. I have previously hinted that it occurs in those who have inherited a severe form of the disease,—those whose systems are thoroughly saturated with the syphilitic poison. For this reason the prognosis of specific pemphigus is very serious,—a statement which is but a reiteration of a common opinion. I believe that all authors agree in regard to this point.

In the patient who is now before you, the disease seems to have commenced about a week after birth, but there were no positive symptoms of it until the child was about four weeks old. This is not uncommon, and inherited syphilis usually makes its appearance within the first three months of life. Of Diday's frequently-quoted cases, the affection commenced in 86 out of 158 children before the termination of the first month. But this is not a rule to which we find no exceptions. Some time since, I showed the class an infant over a year old, whose mother had suffered severely from a constitutional disease, and who then had for the first time a mild syphilitic eruption upon the trunk. I have also seen several cases in which the first symptoms were noticed much later than this,—in the third year of life. One of these I shall show you presently.

By what you see in this child, and from what I have already said, you have learned that the first symptoms of inherited syphilis are analogous to, and must be compared with, those of the secondary stage of acquired syphilis in adults. I think, too, that my experience in this hos-

pital goes to show that just in proportion as the appearance of these is delayed until a remote period after birth, will they be mildly developed. In some instances they are so mild as to escape observation, or else they are not developed at all. I have reported such a case in the *Photographic Review* for February, 1871, and I shall now bring another one before you.

Case II.—Inherited Syphilis without the History of Secondary Symptoms; Severe Tertiary Lesions.—E. H., æt. 8 years. Her parents have had six children, of whom this one is the third. Of these only the eldest and our patient are now alive. The former is a healthy girl. The second child died early in its second year, of summer-complaint. The last three children are all dead, having perished within a few weeks after birth. Her father died four years ago, of hæmatemesis. His wife says that he never had syphilis in any form, but that she was suffering from the disease at the time she conceived this child. Four months after her birth, tertiary symptoms appeared, and she had nodes on various parts of the body. In the middle of 1870 she was the subject of active and severe tertiary syphilis.

At her birth this child was perfectly well. She continued so until she was a month old, when an abscess formed on the back. This appears to have been the result of a contusion which she received at the time. From this time until she was two years old she continued well, so far as her mother was aware. Her mother denies that she ever had any symptoms of the disease with which she is now affected. She was then attacked by infantile paralysis, which presented the ordinary characters of the disease. Five or six months after the occurrence of the paralysis she began to suffer from convulsions. These were preceded by hard, painful swellings upon different portions of the head, but especially upon the forehead, where supuration finally occurred. This was accompanied with enlargement of the lymphatic glands of the neck. She was relieved by treatment, and remained pretty well until she was four years old, when she had nodes upon the upper part of the tibia, the backs of the hands, and the frontal bone. These were accompanied by cutaneous ulcers.

When she was five years old, February, 1869, she was admitted to this hospital, suffering severely from these symptoms. Shortly afterwards a node appeared at the outer condyle of the left humerus, and gradually increased until there was swelling of the whole elbow, with slight synovial effusion. From then until now she has suffered severely from repeated outbreaks of tertiary symptoms. Two years ago, otorrhœa, with which she had been affected at intervals, reappeared, and has continued ever since. Nine months ago she had an attack of interstitial keratitis, which has left the cornea of the left eye hazy. Two weeks ago she complained for the first time of sore throat, and with this she began to discharge offensive purulent matter from the nose and pharynx in considerable quantities.

Present condition, June 5, 1872.—Pale and very anæmic. On forehead, in median line, is a depressed white scar, from which pieces of frontal bone were removed by Dr. Duer, last fall. There is a slight opacity of left cornea from a previous attack of keratitis. (Right eye lost in infancy.) Copious and very offensive, thick, purulent discharge from nostrils. Teeth small, upper central incisors imperfectly developed and slightly notched; but, though suspicious, they are not characteristic. Upon inspecting the throat, thick, yellow, and very fetid pus is seen running from the posterior nares into the pharynx. Upon the half-arches are superficial sloughing ulcers. She has a copious discharge of pus from the left ear. At various points upon the surface of the body are the cicatrices of previous eruptions and ulceration. She now has substernal tenderness, and there are rapidly advancing nodes on each tibia.

I hope that you have been fully impressed by the salient points in this case. The syphilitic origin of the disease is undoubted; but, carefully as I sifted the history, I could not learn that she had ever suffered from any of the ordinary secondary symptoms, while, as you notice, she had nodes upon the forehead when she was two years and a half old, and these were followed

by a similar lesion on the extremities. I have had an opportunity of watching these swellings run their course, and they have all the characters of the nodes of acquired syphilis. Indeed, you can prove this for yourselves by examining those at present on the tibia. It is asserted by Mr. Hutchinson (*Diseases of the Eye and Ear in Inherited Syphilis*, 8vo, London, 1863, p. 216) that the nodes of inherited syphilis first affect the lower part of the humerus. I have now under my care a patient in whom the first bone-disease was in this part, but in this child the forehead was first involved; and I should certainly say, from the cases which I have seen in this hospital, that the forehead and tibia are as likely as the humerus to be primarily affected. But the most interesting point in the case is the alleged absence of secondary symptoms. Some syphilographers, I know, doubt the correctness of such histories as this one. I have already alluded to another which I published in the *Photographic Review* for February, 1871. In that instance the disease appears to have been transmitted from the father, and the child remained well until she was two years and nine months old, when nodes appeared on the tibia, and rapidly produced destruction of the bone. The illustration accompanying the history of that case shows that the disease of the osseous system was of no ordinary severity. Indeed, I do not remember to have ever seen it greater in any of the many and terrible examples of acquired syphilis that I have had the opportunity of examining. The only authority, so far as I am now informed, who acknowledges that these tertiary lesions of hereditary syphilis may be thus tardy in their appearance, and not be preceded by primary or secondary symptoms, is Melchior Robert (quoted by Lancereaux, *Treatise on Syphilis*, New Syd. Soc. ed., vol. i. p. 166). Of his opinion Lancereaux says, "This interpretation may appear hazardous." There is evidently much difficulty in arriving at the truth, and I must confess that I have grave doubts about the secondary symptoms not having preceded the tertiary in this and other similar cases. They may be so mild as to escape the notice, not only of the mother, but also of the physician. Allow me to illustrate this. I alluded a moment ago to the infant in whom the first symptoms of the disease made their appearance when the child was over a year old. I speak positively about that child, for my colleague, Dr. Maury, was kind enough to give me his opinion in regard to him. The mother had been severely affected by constitutional syphilis, the skin being covered with scars, the cicatrices of nodes appearing over the superficial bones, and the hard palate and bones of the nose being totally destroyed. At the time of her conception, and during the whole of her gestation, there were no active symptoms, but, on the contrary, she thought she had recovered perfectly. Seeing that she had been so profoundly affected, I watched the child with great interest. There were absolutely no signs of the inherited disease until the period spoken of, when he had a sparse, poorly developed, scaly eruption upon the lower part of the abdomen, the buttocks, and thighs. At this time he was little less than an infant Hercules, and I could hardly convince myself that the disease was specific in its origin, especially as it disappeared spontaneously in a short time. But a little later he began to suffer from nodes, and then the nature of the disease was perfectly plain. Now, gentlemen, had this child not been watched from day to day, the initial lesion of congenital syphilis would have passed unnoticed. I suspect that such was the case with E. H., and also with my other patient whose history is published in the *Photographic Review*.

Some may doubt that these are examples of hereditary syphilis. The only other explanation for the anomaly is to suppose that the disease was acquired by both children. But you will never meet with a more unequivocal

history than that of the girl whom I show you this morning; while in the other patient of whom I have spoken, it was as clear as is generally obtained. The direct testimony of the parents is likewise opposed to such a view, for I was not oblivious of these objections when I was examining them.

It seems to me from what I have seen that these mild secondary symptoms are to be met with in those children who are ordinarily said to inherit the disease from their fathers, or whose mothers have passed beyond the second into the third stage of the disease, or in whom the affection has been influenced by treatment, or is for the time arrested. Your attention will be called to this hereafter. The point which I wish to impress upon your minds at present is, that the severity of the secondary stage of inherited syphilis forms no measure by which you can determine what will be the extent of the tertiary lesions. The child who is before you this morning proves this; and I could support the opinion by citing several other striking examples which have fallen under my notice. The most severe bone-lesions may follow the most trivial secondary manifestations. This may probably be partly accounted for by the fact that but few of the infants who have the disease early in life are left without treatment, while a large number of these little patients succumb soon after the affection sets in, so that the treatment prevents these symptoms in the one case, while in the other the child does not live long enough for them to be developed. It is therefore probably those who suffer little or none in early infancy who live to reach the period when the tertiary symptoms manifest themselves.

The patient whom I now have before me furnishes you with a good representation of the lesions of the third stage of inherited syphilis. You will find these phenomena described by few writers: indeed, the general opinion has seemed to be that these symptoms belong to the acquired disease in adults, and not to the inherited in children.

There is one point upon which I wish to dwell for a moment before leaving the case. This is the course of the nodes when they were situated near large joints. We have had ample opportunity of studying this in our present as well as in some other patients. The danger is that you may mistake this condition for synovitis, especially if the secondary symptoms have passed unnoticed, and this is the initial bone-lesion of the third stage of the disease. I have seen this error committed in one instance. This occurred when the node developed upon the lower end of the humerus. The patient, after a few days of complaint and inability to move the arm, had swelling of the elbow, accompanied by some synovial effusion. It is when the child is first seen at this stage that the error in diagnosis is most likely to be made; but you will be able to arrive at the truth if you examine the joint carefully, and, above all, if you feel the node upon the epiphysis; for it was in this part that the disease was located in the children of whom I have spoken.

In this girl, the disease of the pharynx and nares is sufficiently well marked. This is entirely different from the coryza to which I directed your attention when the first patient was in the room. That was a secondary, and this is a tertiary lesion. That was probably due to simple erythema or mucous patches upon the Schneiderian mucous membrane, while this, appearing as it has done simultaneously with the nodes in various parts of the body, is likely to be owing to disease of the bones of the nose. The fetor and other characters of the discharge support this opinion. I shall not be at all surprised if we have destruction of the hard palate of the child in a short time. This is not a very frequent lesion. Mr. Holmes (*Surg. Treat. of Diseases of Children*, 8vo, Philadelphia, 1869, p. 351) states that he has never met

with it in inherited syphilis. I have already alluded to a case which I have recorded, in which there was an orifice an inch long by half an inch wide, in the roof of the mouth; and I have, at this moment, a child aged about eleven years under my care who has inherited constitutional syphilis, and who has nodes upon her forearms, tibia, and sternum. At the same time, she is suffering from caries of the hard palate; though this has not progressed very far.

Before dismissing this patient, I ask you to notice the condition of her eyes. As you have heard, the right one was accidentally destroyed in infancy. The other remained healthy until nearly a year ago, when she had an attack of interstitial keratitis. This gradually improved, but it has left the cornea somewhat hazy, so that its appearance resembles ground glass. I call your attention to this, so that you may note the results in certain cases of interstitial keratitis, which is an important ophthalmic lesion of inherited syphilis. I fortunately have the opportunity of showing you examples of the disease in its active stage.

Case III.—Inherited Syphilis; Interstitial Keratitis; Idiocy.

—J. K., æt. 6½ years, came under observation two years ago with a copious specific eruption and mucous patches. These in a great measure disappeared under the use of antisyphilitic remedies continued for some time, but for more than a year she has been taking no medicine. For some weeks she has suffered from irritability of the eyes, though she has shown but little disposition to avoid the light. Upon inspection, a small white spot, unattended by ulceration, is to be seen near the centre of the left cornea. There is no congestion around that structure. In the right eye, the disease has extended further, so that almost the whole cornea has become opaque, and has the appearance of ground glass, while around it is a well-defined but narrow zone of injected vessels.

This, gentlemen, is a fair representation of the earlier stages of interstitial keratitis, but in some instances the disease progresses further than in this child, as it has done in the boy whom I shall now show you.

Case IV.—Inherited Syphilis; Interstitial Keratitis following Nodes; Idiocy.—P. K., æt. 8½ years, has been under observation for two years. He is the brother of J. K., and, like her, he is decidedly idiotic. When first seen, he was suffering from a squamous syphilide and mucous patches, which disappeared under the use of specific remedies continued for several months. In May, 1871, he had a node on the left humerus, which caused him much pain, and finally yielded to iodide of potassium. From then until last fall he continued pretty well. At this time he was found to be suffering with sore eyes. The disease began in the cornea and gradually extended until the whole of both of these structures was involved. The left eye presents the usual ground-glass appearance, and there is an injected zone around the margin of the cornea. In the right eye the margin of the pupil is seen with difficulty through the cornea, which, instead of being non-vascular and white like ground glass, is deeply injected, and of a sort of brick-dust or salmon hue. Vessels can be seen traversing every part of its structure, while around it the tissues are deeply injected. There is no ulceration on any part of it, and the boy does not complain of intolerance of light. His upper central incisor teeth are well formed.

In these two cases, you have examples of two stages of one of the most interesting of the ophthalmic lesions of congenital syphilis. These, like all the other effects of the disease, vary with its stage. You are well aware that during the early part of the secondary stage of the acquired affection in adults, the eye is liable to be attacked by serious inflammations; but the one which is chiefly interesting and important is iritis,—a disease which is by no means analogous to the one which we are now discussing. Iritis, while it sometimes occurs, is quite rare in infantile syphilis, much more so than it is in the acquired disease of adults. On the other hand, the affection of which these two children present ex-

amples is, if we may judge by the cases in this hospital, sufficiently common, and is the more interesting because it has no analogue among the symptoms of the acquired affection. Keratitis is an inflammation of the cornea, and was until recently supposed to be scrofulous in its origin. In the last decade, however, Mr. Jonathan Hutchinson described it again, under the name of Interstitial Keratitis, and gave it as his opinion that it never appeared except as the result of inherited syphilis. This statement has been questioned by some eminent authorities, but I know of no reason to doubt the conclusions of Mr. Hutchinson. I have had the opportunity to examine a large number of cases of scrofula in the Children's Department of this hospital, and I have never seen interstitial keratitis associated with other symptoms than those of inherited syphilis.

In the first and the younger of these patients, the affection has but begun. In the one eye—the left one—you see that there is no manifestation of disease except a small opaque spot in the centre of the cornea. This is the way in which keratitis ordinarily commences. Sometimes the opacities are multiple, and the disease spreads from two or more centres at the same time. The location of these spots, in the beginning, is near the middle and in the substance of the cornea, and they spread from the centre towards the circumference until the whole of the structure, excepting a small circle upon its margin, has become opaque. This condition is already represented in the opposite eye, which presents the characteristic ground-glass appearance of the disease. In addition, I ask you to observe one or two other striking peculiarities of these cases. Neither has any ulceration of the cornea, which is always true in uncomplicated keratitis. You notice, too, that upon a mere ordinary inspection the girl does not seem to suffer much with her eyes, and unless you examined them carefully you might fail to see that they were diseased. They are evidently somewhat irritable, for when she comes into a bright light she makes some effort to protect them; but the irritability is not great, for she never refuses to expose herself to the light in any portion of the ward if curiosity or pleasure tempt her. The same may be said of her brother; and this is true of nearly all cases of interstitial keratitis which I have had the opportunity of observing.

A non-professional person would not suppose the girl to have any disease of the cornea, unless he made a somewhat critical examination. This is due to the fact that there is but little increased vascularity of the other structures of the eye. There is no deeply-injected zone immediately around the cornea, but only a little increase in the vascular supply. This is the usual condition in this disease, and I but describe one of its ordinary characters when I call your attention to this peculiarity. In some instances, however, you will see the inflammation pass beyond this stage, when the eye loses the smooth, slightly-polished, opaque, ground-glass appearance, and the cornea becomes slightly granular and faintly pink instead of white. This condition is illustrated in this boy,—the girl's brother,—whose right eye is injected, red, with the cornea slightly roughened and salmon-colored, while around it there is an irregular zone of turgid vessels, fringes of which extend into the structure of the almost opaque cornea itself. This is a severe case of syphilitic keratitis, and is a very good illustration of the characters which it sometimes presents when it has been neglected.

I hope that you have noticed that in both of these children the inflammation of the cornea is a symmetrical lesion. This is usual; though in the cases which I have seen, the disease was not equally severe in both eyes. It had usually advanced further in one than it had in the other when the patient sought advice. This is due to the fact that, though a symmetrical disease as

ordinarily seen, interstitial keratitis usually begins on one side first, and after a short period attacks the other.

Both of these children are over five years old. There is another child in the ward in whom the disease is just setting in as she is entering her twelfth year. Keratitis is a late manifestation of inherited syphilis, and is to be placed in the group of tertiary, rather than secondary, symptoms. You see that in the boy it followed the subsidence of the skin-eruption, while it appeared after a node upon the humerus. In the girl it has preceded any bone-symptoms. In E. H., however, it followed repeated outbreaks of nodes upon the forehead and humerus. In the other case which I alluded to as being at present in the ward, the commencing lesion is associated with tertiary symptoms.

Being a symptom of the last stage of the disease, keratitis is not to be looked for until the patient has passed beyond the period of infancy and entered upon that of childhood or adolescence. It usually occurs between the eighth and the eighteenth year. (Hutchinson, *loc. citat.*)

There is only one other point in connection with these two children to which I wish to direct your attention. It cannot have escaped your notice that they resemble each other in the most striking manner, and I now ask you to notice the fact that they are both idiots. I have for some time had a suspicion that there is a relation between idiocy and congenital syphilis,—that in a given number of syphilitic infants a larger proportion of them will be defective in mental development than among the same number of children not so diseased. I should not be willing to express a positive opinion upon this subject without having had further opportunities to investigate it. I think, however, that the matter would repay examination.

ORIGINAL COMMUNICATIONS.

LIP-READING AND ARTICULATION IN THE EDUCATION OF THE DEAF AND DUMB.

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THE system of educating mutes by lip-reading and articulation is the so-called German system, although at the present time employed in most continental countries; within the last four or five years it has been introduced into England. Mr. W. B. Dalby, aural surgeon to St. George's Hospital, London, has done much to bring this subject before the English people.

In 1871 he read a paper on this topic before the Social Science Association, in Leeds, and in the early part of this year published a pamphlet containing many important and interesting facts connected with the method of instructing the deaf and dumb in the use of articulate speech. It is to this pamphlet, entitled "The Education of the Deaf and Dumb by Means of Lip-reading and Articulation," that I owe the principal facts contained in this article. To these facts I have added some personal observations, hoping that the paper, in the end, might not be uninteresting to the profession in my own country.

The system of lip-reading is not new, for we are told that in the eighth century of our era a mute was taught the Christian religion by reading from the lips of John de Beverley, Archbishop of York. The system of to-day is that elaborated in the last century by Heiniche, a German. He met with many obstacles to its introduction, and died without seeing the triumph of his ideas. His plans of instruction are now, however, fully under-

stood, and thoroughly taught, in Germany and other continental countries.

This system, as well as any other, demands intellectual faculties in the child, "not more than usually deficient;" and of course cleft palate, and other malformations of the organs of speech, entirely preclude its use. The education commences when the child is seven years old, and eight years are necessary before the child can read from the lips of *ordinary* persons, and speak so as to be understood by them.

All signs are excluded, excepting such as are necessary to attract the attention of the child and direct it to the teacher. Much depends upon the inherent powers of attention and imitation on the part of the child, for this is the substance of the instruction and its success.

A child who has never received any instruction is brought into a room where a hearing person is spoken to by the teacher. "The child soon notices that when the teacher speaks or moves his lips, the listener turns and looks at him, and he thus learns to direct his attention to the *lips* of the teacher." By placing their lips and tongues in proper positions the mutes are taught to use an alphabet of sounds, and as the pupil progresses he is taught to join some of the simpler sounds together and form words.

When the word is at last mastered, the child's attention is drawn to some object or picture representing the word pronounced.

H is the first sound learned. A is the next. By depressing the child's hand, held in that of the teacher, the child is taught to lower his voice, and by placing the child's hand on the teacher's larynx he is taught to perceive the slighter vibrations when the voice is lowered.

When the sound for the letter A is learned, the child is taught, for example, the sound for the letter P. By the union of these two sounds the word "ape" is uttered. After learning the letter A, it is shown to him written down. He is taught also to write it. He is then able to recognize the letter or sound when used by his teacher—to utter it himself—to understand its meaning—to recognize it when written—and to write it himself.

The sound-alphabet is divided into bi-labials, incisor-labials, incisor-linguals, and gutturals. The sound for Y is the last learned, and cannot be mastered till the vowel sounds are perfectly learned, but it will then be found to be composed of the two sounds equivalent to E and A. Hence, if the *mute* is taught to pronounce a word written "eas," he will articulate the word "Yes," as used by us.

Mr. Dalby says, "The spelling-book of the mute, therefore, will differ in some degree from that of an ordinary child, as he will not make use of or connect in his mind the same sounds that we are accustomed to do in pronouncing the individual letters of the alphabet, but he will produce the very same word when the letters are joined together. Thus: a-p-e spells ape, for us and him alike; but each letter, individually, he will call by a different sound to that which we make when naming it. Strictly speaking, the mute's alphabet is more correct, but less arbitrary, than ours."

The simplest sounds taught are labials, and these, in fact, are the sounds first learned by children who can hear. The next sounds which are learned are those formed by the teeth and lips. Care is necessary to produce the expirations properly, otherwise the sounds may die upon the lips before they are thoroughly emitted from the mouth. This applies especially to the English language: children who have had as much as two years' instruction will, however, detect any one addressing them with the form of a word without emitting any sound.

Accentuation of a syllable is taught by bringing the arm of the pupil down forcibly as the accentuated syllable is being pronounced.

As the pupil advances into his second year, he is taught to pronounce words of two or more syllables, and those in which two or three consonants occur, before or after vowels, as in the words *arms*, *straw*, *place*, etc. In learning these, however, the tendency of the child is to pronounce the words so deliberately as to virtually make polysyllables of them; for example: he will say *ser-ter-aw-* for *straw*, *per-lace* for *place*, etc.

Practice, however, overcomes this defect to a great degree. Dactylology, or the science of conversing with signs, is sedulously excluded in the education of mutes by means of lip-reading. It distracts the attention of the pupil, and he ceases to improve in the use of speech. After a child has learned to talk, he may learn to use dactylology as an accomplishment.

Mr. Dalby says, "If the child can make its wants known by making signs, although its attention may be called to the lips of the teacher, it will not be able to maintain its attention with sufficient perseverance and care to permit of the full development of the fine muscular sense inherent in the tongue, lips, palate, and throat."

In at least one of the institutions for the education of mutes in our own country, the reverse of this plan is adopted, and the children are taught articulate speech as an accomplishment; but, as I am informed by one of the trustees, with no very brilliant results. The writer had an opportunity, a few months ago, of visiting the celebrated Deaf and Dumb Institute in Vienna, where the system of lip-reading and articulation is taught, to the exclusion of all systems of signs. He noticed, however, that the pupils constantly used signs with each other, and, upon inquiry, learned from the teacher that this was a self-taught system of dactylology, and used in common by most mutes. Judging from the proficiency of the pupils in the use of articulate speech, this system of signs *among themselves* had not interfered with their progress in the mastering of their tasks according to the methods of the institution.

The exclusion of all signs applies therefore entirely to the intercourse between the teacher, or parents, and the pupils.

Thus the child soon learns that his only means of conveying information to his teacher, or obtaining it from him, is by the use of lip-reading and articulation.

Children born deaf are not the only ones benefited by this method of instruction. Those who have become deaf, retaining however the power of hearing very loud sounds, yet unable to learn to talk by the ordinary means, may be instructed by the plan under consideration.

It appears that such children learn to use speech a little more euphoniously than the perfectly deaf mute who is taught to use articulate speech.

2dly. If the child is able to hear words shouted near its ear, it will consequently learn much sooner.

3dly. Mr. Dalby says, concerning this very important point, "In the case of a child who has learned how to speak, and at an early age, say seven, has lost its hearing completely by scarlet fever or the like, it is well known that from the fact of its not hearing others speak it will not be tempted to make use of speech itself, will gradually depend more and more on signs, and in a short time will have lost all power of speaking. For such patients this system is invaluable; for if they are taken in hand as soon as they become deaf, they can, with very little difficulty, be made to learn lip-reading, and will thus retain their speech; or when it is beginning to be forgotten, will rapidly relearn."

The early years of instruction are filled with a high degree of physical labor to the teacher, but in time the more advanced pupils notice and correct mistakes occurring in the less advanced. The pupils are taught in

classes, although residence in an institution devoted to this system is not necessary to the accomplishment of articulation and lip-reading on the part of the mutes. In fact, the advantage gained by early putting in practice what they have learned, and observing others in the daily avocations of life, is manifest. Hence the system of day-schools is perfectly applicable to this method of teaching, since it furnishes greater variety of intercourse, and is *much cheaper*.

Among the advantages of this system over the old method of dactylology may be cited the following:

The mute is furnished with a common means of understanding others, and making himself understood by all he associates with. The slowness of the method, in comparison with the ordinary method of communication by means of signs, is compensated by the *end attained* when the use of articulate speech is accomplished, and the child, when he leaves school, is able to talk to every one, and is not limited in his intercourse with the few who possess the power of communication with their fingers.

M. Saegert, the Inspector-General of Education of deaf-mutes in Prussia, in his report for 1856, says, "Ninety-nine per cent. of deaf-mutes have the organs of speech normal; they will speak if they have good sight and touch; the greater or less probability of success depends solely (*uniquement*) on the greater or less capacity of the master."

After the mutes have learned to use articulate speech, although their modulation is not euphonious, they can converse with any one on ordinary subjects, and follow conversation not addressed to them, if the speaker is not too far from them, and if they can obtain a good view of his features. Those who enunciate distinctly will have no difficulty in being understood by mutes. This fact can be readily proven by a visit to the celebrated schools of Cologne, Rotterdam, and Vienna. In the latter I had an opportunity of spending some hours—hearing the pupils questioned, and their replies. The examination consisted in a running conversation between teacher and pupils on different countries, their products, people, and government. The only error in any answer was that of a little fellow who, in reply to the question, "Who is President of the United States?" said, "Jefferson Davis;" but he was instantly corrected by a young girl of fifteen, who said, "Ulysses Grant."

The most satisfactory test of the efficiency of the system, so far as I was concerned, was the readiness with which the pupils understood my German, answering promptly and politely my questions, although fully able to discern that I was not a native. The voices of the pupils are not disagreeable or harsh, although unnatural and sad in their tones. Those of the girls sound more like the cracked voice of old age, and on this account are the more striking, since we expect in the young female the musical notes of youth. The boys' voices are not so strange, since we expect less from them in respect to the melody of speech.

The chief obstacle to the advance of this system of education, though far from being insurmountable, lies in the difficulty of procuring suitable teachers. Since few can be obtained who are willing or able to undertake the task, and as their acquirements must be great, their salaries will be high. It is said that one year of constant practice is necessary to perfect a teacher so that he can instruct even the beginners.

"It is practically found," says Mr. Dalby, "that it requires one teacher for every class of ten or twelve children; therefore, undeniably, nearly double the number of teachers are necessary for this than for the other system, and, consequently, it is the more expensive of the two."

When the pupil has at last learned to articulate words and to understand what is said to him, his education

may be extended by the ordinary method of reading, relieving the duties of a teacher, and adding greatly to the pleasure of the pupil. In three years of attentive study, a child will begin to converse on ordinary topics, will understand arithmetic and geography, and will be able to write well. As has been stated, eight years are requisite for learning to converse with *any one* in the affairs of daily life.

It is claimed that a positive benefit to the health of the pupil is one of the results of this mode of instructing mutes. This may be attributed to the more normal use of the pulmonary and laryngeal functions, besides the moral effects arising from a feeling, on the part of the mute, of a nearer equality with his friends and family.

All authorities agree in the opinion that, the sooner a child begins, the more rapid is his progress in learning to talk, and that an adult mute is a very unapt scholar, rarely making any advance in the use of articulate speech. Since it is evident that so much may be accomplished by the careful education of young mutes, may we not hope that this system will gain a fair trial in our own country?

CLINICAL NOTES.

BY DR. H. C. WOOD, JR.

CHRONIC ENDOCARDITIS—PRESYSTOLIC MURMUR— ABSENCE OF SECOND SOUND.

THE following case is of some interest as representing what may be termed chronic endocarditis, affecting both the left and the right side of the heart. The affection appears to have run its course in about two years, and resulted in an almost complete obliteration of the mitral orifice, and in marked changes of the tricuspid. Apparently the latter lesions were not consequent upon the mitral disease, but were the result of the same cause that produced it. They were evidently not due to a giving way from strain of the valves, but were of similar nature, though of less extent, to those of the left auriculo-ventricular valve.

Clinically the existence of a diastolic murmur, strictly presystolic in time and in fact running into the systolic sound, was of interest. An examination of the heart after death showed that the conditions were the most favorable possible for the generation of such a murmur; the enormously dilated and hypertrophied left auricle and the peculiar fringe-like obstructions to the passage of the overdriven blood, united, could not fail to give rise to a sound.

The absence of an aortic second sound was also of interest. The reason of its absence is obvious. The left ventricle during life was probably never well filled, owing to the great obstruction at the mitral orifice. Moreover, when the ventricle contracted, the blood flowed back into the auricle at least as readily as it entered the ventricle. From these two causes the aorta was never filled with blood, never sufficiently distended to provoke a strong enough pulsation to drive the blood back upon the heart with sufficient force to generate the sound by the flapping to of the semilunar valves.

Therapeutically, the very great relief obtained from digitalis, and the sudden almost fatal dyspnoea, caused by the hot bath, are points worthy of study.

The following is taken from my note-book:

Jane Bates, æt. 25, mother of three children, entered the wards of Philadelphia Hospital, September 20, 1871. She states that she has never had rheumatism, but that she has been sick two years, with increasing dyspnoea and occasional severe cough.

Present Condition.—Patient is in good flesh. Her face is exceedingly cyanotic. The veins of the neck are large, but exhibit no pulsations. She suffers greatly from dyspnoea and also from a short dry cough; the expectoration is scanty, consisting only of bloody, frothy saliva and mucus.

Physical Examination.—The area of cardiac dulness is very much increased. The aortic sounds are normal. A very loud systolic murmur exists at left apex; also a very decided systolic murmur at ensiform cartilage; by carrying the ear to right of sternum this murmur is lost, but cannot be separated from the right sound.

Liver dulness extends about one inch below ribs.

September 24, 1871.—Night before last had ten grains chloral, which caused her to sleep until 6 A.M.; the night following it was tried, but without effect; it was again repeated, but made her sick.

September 27.—Ordered tincture of digitalis, gr. x t. d.

October 5.—The digitalis affords her great relief. The dyspnoea has markedly lessened. The flow of urine has increased somewhat. There is no marked effect on the pulse, except that it is more regular, 100 per minute.

October 11.—Patient has steadily improved since last note. Pulse, average, 94; breathing and cough better. Passed during last twenty-four hours sixty ounces of urine.

November 11.—Continued taking tincture of digitalis, without any effect on the pulse, it remaining at 100 per minute; her general condition has somewhat improved; the swelling has decreased; the dyspnoea is less; appetite good.

December 11.—There has been no improvement since last note. Her pulse continues the same, notwithstanding the dose of tincture of digitalis has been somewhat increased and steadily continued up to December 9, 1871. Her limbs swell, and at times the abdomen. The legs have been bandaged, giving some relief and enabling her to walk about. On the 9th she was put into a hot bath (110° F.), but the dyspnoea instantly became intense, and accompanied with a livid purple face; after staying in bath ten minutes, death from suffocation became imminent, and she was removed. She has been passing for some days from eighteen to twenty ounces of urine per day. She suffers greatly from dyspnoea, but relief is afforded by Hoffman's anodyne. She has been spitting blood constantly in small quantities, with a hard cough.

A very careful study of the heart-sounds leads to the following conclusions: at the left apex there is a very loud systolic bruit, which is immediately preceded by and continuous from a soft murmur heard during the latter part of the diastole. At the right apex there is a marked systolic murmur which is apparently generated at the tricuspid valve.

The aortic sounds are masked by the apical murmur; but the first sound can be apparently separated by going clear to right of sternum. It is prolonged into a short, soft murmur. Second sound lost, or so exceedingly faint that it cannot be distinctly heard. Pulmonary artery sounds can be isolated; apparently normal. No murmur in carotid or radial. Mitral murmur very faint in back, scarcely to be certainly detected.

December 13.—Ordered pulv. digitalis, pulv. scillæ, ãã gr. j five times a day, and comp. spirit juniper, fʒj t. d. Hypodermics to lessen the severe muscular pain in the shoulder.

December 20.—Amount of urine passed daily varies from twenty to twenty-four ounces. She is more comfortable. There is less shortness of breath, much less water in abdomen, and not quite so much in the feet. Pulse, 96. Cough very much better. No spitting of blood for a week. Stopped pills, and ordered comp. spirit juniper to be increased to fʒij per day.

December 22.—The amount of urine passed daily ranges from eighteen to twenty-two ounces. The digitalis and squills ordered to be stopped, and no medicine except the compound spirit of juniper freely.

January 2, 1872.—Up to 22d ult. she was kept on juniper, and all the symptoms became much worse, and the quantity of urine decreased, ranging from eighteen to sixteen ounces. At date mentioned she was put again on scilla and digitalis, ãã gr. vij a day. The urine has increased, ranging from eighteen to twenty-two ounces. Pills stopped; digitalis continued, gr. ij daily, and fluid extract of scoparius fʒj, every two hours, "eight doses per day."

January 2.—Patient much worse. Urine not passed so freely, daily amount ranging from sixteen to eighteen fluid-ounces. Ordered digitalis and fluid extract of scoparius.

January 31.—The digitalis afforded some relief, but the patient gradually grew worse, and died last night, profoundly dropsical and exhausted.

Post-mortem.—Cadaver very dropsical, skin intensely erythematous, sloughing: Two ounces of straw-colored fluid, without lymph, in pericardium. Heart enlarged, with the walls enormously thickened, its ventricles about normal in size, but its left auricle enormously dilated and hypertrophied.

Semilunar valves.—Aorta, with an elevated, rounded, hard ridge at base of each valve. Valves themselves nearly healthy, allowing with hydrostatic test slight reflux.

Pulmonary valves.—Normal.

Mitral valves.—Covered with vegetations of all sizes and shapes, rendering valves totally immovable, and nearly choking up the orifice.

Tricuspsids.—Bound down by a recent white, fibrinous clot, not nearly so much diseased as mitral valves, but still with abundant, large vegetations.

Abdomen.—Very full of straw-colored fluid, with large quantities of recent lymph, without much injection.

Kidneys.—Normal.

NOTES OF HOSPITAL PRACTICE.

WILLS OPHTHALMIC HOSPITAL.

SERVICE OF GEORGE C. HARLAN, M.D.

Reported by CHARLES K. MILLS, M.D.

RETINITIS.

Y. M., æt. 14, the day before applying to the hospital was struck on the left eye with an exploding fire-cracker. Examination of the injured eye showed considerable ecchymosis of the upper lid, moderate conjunctivitis, and a little blood at the bottom of the anterior chamber, probably from a rupture of one of the vessels of the iris. The pupil dilated irregularly, but freely, under the influence of atropine. The other eye was not sympathetically affected. Vision equalled $\frac{20}{60}$.

By the ophthalmoscope the disk was found to be much reddened and the vessels dilated. Several small specks of extravasation were detected, and at the upper part of the retina there was a slight haziness from oedema.

The artificial leech was applied to the temple, sulphate of atropia, grs. viij to f ʒj, was instilled, and he was ordered a Seidlitz powder, and to be kept in a darkened room.

At the end of ten days, the ecchymosis and conjunctivitis had disappeared, and the blood in the anterior chamber was nearly all absorbed. Vision now equalled $\frac{20}{XXX}$, two-thirds of normal.

The ophthalmoscope now showed the disk slightly "choked," and the vessels tortuous and in some places interrupted. The oedema of the retina was not diminished.

At this stage Dr. Harlan prescribed iodide of potassium, grs. x, and the bichloride of mercury, gr. $\frac{1}{2}$, three times daily. An eight-grain solution of sulphate of atropia was also instilled in both eyes to insure complete rest, by preventing the patient from using even the sound eye.

The case still remains under treatment.

ANTERIOR STAPHYLOMA FROM SYPHILITIC IRITIS.

M. M., æt. 22, acknowledged having had gonorrhœa six months before applying for treatment. She probably had had a chancre, but this could not be determined. Her appetite had been poor, and she had lost a little flesh, but she had not suffered from bubo, sore throat, or any affection of the mucous membrane of the air-passages. An eruption, probably syphilitic, made its appearance on her face and arms nearly four months after she first noticed an unhealthy vaginal discharge. She had no abscesses, ulcerations, or tibial nodes, and never had experienced pain in the long bones. She had had a mild form of psoriasis palmaris, which had not disappeared at the time of her admission; and she had had two bad attacks of orbital neuralgia a few days before this time.

About four weeks before coming to the hospital, her right eye began to inflame, and, although under treatment, it rapidly got worse, and presented a striking appearance when

first seen. A large staphyloma anticum of the sclerotic had evidently existed for several days, having formed in the short space of three weeks from the date when her eye was first attacked. The staphyloma was probably due either to a thinning of the sclerotic and increased intraocular pressure, or to a gummatous deposit in the ciliary region,—the latter view being rendered more likely by a bulging forward of the iris, which gave to the pupil a deep-set appearance. The conjunctiva was much engorged, and the eye was intensely painful. Around the cornea the zonular redness was at first very marked; but while under treatment it gradually changed to a beautiful bluish tinge. The iris was adherent at several points along its pupillary margin, causing a slight irregularity of the pupil. Irido-cyclitis, in one of its worst forms, was holding full sway over this eye, the restoration of which was deemed hopeless. The patient came, in fact, to be treated for the left eye.

Two or three days before admission, her left eye had begun to be seriously affected. It presented decided symptoms of incipient iritis,—pain in the ball, slight darkening of the iris, episcleral zone, etc.

She was at once placed under treatment. An eight-grain solution of sulphate of atropia was instilled twice daily in both eyes. Inunction with mercurial ointment was ordered to be used daily, and quinine, with iodide of potassium and the bichloride of mercury, was given internally.

In two days after coming under treatment, the pain in the left eye had ceased, and in a week the right was also free from pain. She has now been in the hospital five weeks, with the above treatment and good diet: the left eye is entirely well, and even the right has much improved, all active inflammation in it having subsided.

ABSORPTION OF ORBITAL FAT.

J. S. B., æt. 42, nine years since was struck violently across the nose and eyes with a heavy rope. The blow fractured his nose, and left him unconscious for five hours. The day after the accident, black spots appeared before the right eye, and its acuteness of vision began rapidly to diminish; at the time of coming to the hospital he had only a perception of light in this eye. Four months after the injury, the sight of the left eye became suddenly dim, and has remained without material change ever since, vision in this eye equalling only $\frac{20}{60}$, or one-fifth of the normal acuity, refraction being emmetropic and accommodation $\frac{1}{12}$.

A few days after the accident, the left eye began to sink in its orbit, and continued to do so until it reached its present peculiar condition: the orbital fat has been entirely absorbed, and the lids falling in have caused a deep sulcus above and below the eye. When the lids are raised, the anterior two-thirds of the ball can be plainly seen. The motions of the ball are limited in all directions but downwards. The patient can scarcely raise the pupil above the horizontal line.

SLOUGHING KERATITIS.

H. M., æt. 24, six years before coming under the notice of Dr. Harlan had primary syphilis, and was still occasionally troubled with a stricture. Now and then for five years he had suffered from rheumatic attacks, and once he had had an eruption of red spots.

He never had any trouble with either eye until three days before coming to the clinic, when he went to bed in the evening feeling quite well, and awoke the next morning with the right eye painful and highly inflamed. He remembered having been exposed to a draught while he slept. He never to his knowledge had a foreign body in the eye.

When first examined, in addition to great conjunctival injection, lachrymation, and photophobia, he had a central ulcer of the cornea, and a slough about 2'' in length between the corneal layers immediately over the pupil. Vision equalled only $\frac{8}{60}$, one twenty-fifth of normal.

A free incision, with a Graefe knife, was made in the cornea, and the slough removed, and after the operation atropia was daily instilled. The patient rapidly improved, the inflammation abating, and vision in ten days coming up to nearly one-half of its normal acuteness. He still reports.

TWO CASES OF CONGENITAL MICROPTHALMOS.

G. M., æt. 17, had very small eyes, the corneal diameters being only four lines. The fat was entirely absent from both orbits. The lens of the right eye was cataractous, and vision in this eye only quantitative. The pupil of the left eye was clear, except a small white speck at the inner edge. The catoptric test showed three images, proving the presence of the lens. Acuteness of vision was one-fifth— $V = \frac{20}{100}$. When the accommodation was paralyzed by atropia, a convex lens of 3'' focus gave the best distant vision, showing a total hypermetropia of $\frac{1}{3}$. Nystagmus was marked,—the eyeballs oscillating rapidly and almost constantly in a horizontal direction. This nystagmus and the contracted pupil prevented ophthalmoscopic examination.

Y. M., æt. 14, a brother of the last patient, presented a similar condition of the eyes as regards size, absence of orbital fat, nystagmus, etc.; and, in addition, he had convergent strabismus of the left eye, and in the right a good example of coloboma, having a fissure downwards in the iris. He had a manifest hypermetropia of $\frac{1}{3}$.

Several other members of the same family have serious congenital defects of the eye.

NUCLEAR CATARACT.

M. M., æt. 17, supposed that his eyes had always been in about the same condition that they presented when he applied to the hospital. He had distinct nuclear cataract in both eyes, the opacity of the lenses just occluding the pupil in moderate dilatation. The cataract did not present the yellow or yellowish-brown tinge of senile nuclear cataract, but was white, or, more strictly, grayish-white in color. After the eyes were placed under the influence of atropia, the peripheral portions of the lenses were discovered to be clear, with the exception of a few slender striæ. The fundus of each eye was found to be normal, being easily seen around the cataracts. The refraction of each eye was emmetropic, and vision in each equalled $\frac{20}{LXX}$, or two-sevenths. When the atropia was instilled, this vision was increased to $\frac{20}{L}$, or two-fifths.

ELECTROLYSIS.—Drs. Beard and Rockwell (*Med. Record*, July 15) publish some of their results in the use of electricity in surgery.

In the treatment of erectile or vascular tumors, they claim for electrolysis the following advantages over the knife or other methods: there is no hemorrhage; there is no scar; by proper management, the effect produced is solely upon the blood in the tumor; the operation is easily performed.

In proof of this, they adduce cases.

I. A child æt. 8 months, with an erectile tumor in the cheek. Four needles introduced for eight minutes. A clot was produced, which was wholly absorbed in four months.

II. A large tumor in the back, in a weakly child æt. 1 year. Same operation. Result unsatisfactory, as some ulceration followed, and the tumor remained.

III. A child æt. 15 months, with a tumor near the angle of the mouth. Four needles introduced for ten minutes. In four months the tumor had disappeared, and no scar was left.

IV. A subcutaneous erectile tumor at the inner angle of the eye, in a child æt. 16 months. Three needles introduced for twenty minutes. Some sloughing occurred afterwards, and deformity was left. The authors think too strong a current was used, and for too long a time.

V. A child æt. 8 weeks, with a nævus on the neck, just below the chin. One needle introduced, and a sponge electrode applied externally, for four minutes. Two and a half months afterwards there were signs of reappearance of the growth.

VI. Bronchocele of four years' standing, in a girl æt. 14 years. External galvanization twice a week for two months failed. Needles introduced; in four months, after about twenty applications, a great decrease in size in the tumor.

VII. Fibrous bronchocele in a woman æt. 29. Satisfactory diminution in size from external galvanization, followed by the introduction of needles. Result not known, as she failed to report after three and a half months of treatment.

VIII. Large cystic tumor in the axilla of a nursing woman. External galvanism for a month, with some result. Introduction of needles eight times in the ensuing three months, with very great decrease in the growth. Final result unknown.

IX. Cystic tumor of forehead in a woman æt. 60. One application of the needles for five minutes successful.

X. Epithelioma of lower lip. "Mrs. J. C., æt. 65. In September, 1871, a little hard lump, the size of a pea, appeared on the left side of the under lip. By January 19, 1872, it had extended from the angle of the mouth along the lip to the median line. The surface presented a warty appearance, was exceedingly hard, and bled readily. Localized galvanization (external) dissipated almost completely the excessive pain in the diseased part. On January 26, five uninsulated needles were introduced into the lip, *around and beneath* the tumor, so as to entirely separate the healthy from the unhealthy tissue, and a current of considerable tension from eighteen cells was allowed to pass for twenty-five minutes. Equal parts of chloroform and ether were administered.

Inflammation and suppuration followed, and in two days the entire tumor had sloughed away.

By February 2 the inflammation had subsided, and the surface was covered with healthy granulations. Improvement continued until February 23, when the surface had entirely healed, and the patient was discharged as cured, with a well-formed lip.

XI. Large uterine fibroid. External galvanization to abdominal surface and os uteri used twice a week for nearly four months, with great relief of pain, and improvement of general health. One needle introduced into tumor (the other pole applied externally?) for fifteen minutes twice a week, for two months. Much decrease in size of tumor. Patient lost sight of.

XII. Indolent ulcer of the arm, in a woman æt. 40. Wet cloth connected with positive pole on ulcer, the negative pole being applied to some neighboring point. Entire healing in six weeks.

XIII. Syphilitic ulceration in a woman æt. 40. A needle connected with the positive pole was passed through the base of the elevation, and a current of moderate tension allowed to pass for a few moments. Pain relieved. After the third application, healing took place.

These interesting reports are to be continued.

DISLOCATION OF SPINE, WITH FRACTURE; REDUCTION WITH PULLEYS; RECOVERY.—The *Lancet* of March 23 contains the following remarkable case, with a reference to a similar one published in it, January 2, 1869.

J. M. G., a porter, aged 29, was admitted into the Southern Hospital, Liverpool, January 26, 1871, suffering from fractured spine. The accident occurred by a bale of cotton falling on his back while he was in a stooping position. The seat of fracture was about the fourth or fifth dorsal vertebra, and there was overlapping of the lower portion for about an inch.

Within half an hour after his admission, chloroform was given, and reduction effected by means of pulleys, traction being made on both thighs and on the chest, when the deformity disappeared. There was priapism after the reduction, and slight paralysis, and hyperæsthesia of the legs, which continued for about a fortnight. An opiate was given after the operation, and the acetate of ammonia as a simple febrifuge. The paralysis and hyperæsthesia gradually disappeared, but he suffered considerably from pain over the right side of the sacrum and the gluteal region, which was relieved, after morphia subcutaneously and blisters had been tried, by the application of Corrigan's heated iron.

He was discharged, cured, May 7, 1871, and was shortly afterwards able to do the ordinary work of a porter, suffering merely from slight angular curvature of the spine.

DEATHS BY LIGHTNING.—The present summer has been remarkable, among its other meteorological features, for the number of deaths by lightning which have occurred. Several persons have lost their lives in this way in Philadelphia, and almost every newspaper contains advices of such accidents in various parts of the country. It would be interesting to ascertain, if possible, the exact relation of the electrical phenomena of this season to the great and continued heat.

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EDITORIAL.

REORGANIZATION OF THE AMERICAN MEDICAL ASSOCIATION.

WE believe we express the opinion of the majority of the thinking men in the profession in this country, when we say that the American Medical Association has lamentably failed to accomplish the great ends which its projectors had in view. It is not, and never has been, in any sense, a body representative of the medical men of America; it has not now, and never has had, any power either with the medical schools, with the profession, or with the public. As the result of the combined efforts of the delegates, this mountain is every year, like an Irish laborer's wife, delivered of a large and very homely infant, in the shape of a volume of Transactions, which is never read after it leaves the printing-office.

Neither in its meetings nor in its publications, then, does the Association wield any influence, *because* it is not representative of anything; for herein, we believe, lies the root of the trouble. Can it be doubted that the moral and intellectual force of the medical profession in this country, if put forth through a medium which should concentrate and fairly express it, would command respect wherever its influence reached?

In the *Boston Medical and Surgical Journal* of July 25, we find a plan so strongly commending itself to our favor, that we desire earnestly to call the attention of our readers to it. After mentioning some suggestions previously made in the *New York Medical Record*, viz., That the Association should hold its sessions with closed doors, that delegates should serve for longer terms, that the committees should be larger, and chosen more fairly, and that the Transactions should be abolished,—these suggestions the writer in the *Boston Journal* thinks might in time be carried out, after the following plan of organization has been put into thorough working order.

"In future, then, let the Association have, or rather consist of, a working Board, a true representative body, of limited numbers, membership in which shall be the reward of professional ability, usefulness, and eminence. Two from each State would be a sufficiently large number for all practical purposes. Let this Board be called the National Council of the American Medical Association. Let this Council meet once a year at some convenient place, say Washington, or as the Board might from time to time determine, and continue

in session sufficiently long to attend to all legitimate business, scientific and professional, everything, in fact, in the interests and needs of the profession throughout the Union—giving such advice, recommending such rules, issuing such 'Transactions' as would be for the elevation and advancement of the whole profession. Let the term of service for these two National Councillors be six years,—one to be chosen every three years; and, to place them as much as possible above temporary influences and purely local interests, let them be chosen by a State Council, which, for this and other duties, may be constituted and elected as follows:

"Let each of the several State Societies choose from its most experienced and best-qualified men a number equal, say, to that of the State's Representatives in Congress (one-third each year), and, as far as convenient, to obtain representation of all parts of the State—one from each Congressional District. Let these hold office for three years, and form what may be called the Local or State Council of the American Medical Association. They could meet yearly, or oftener if found useful, to consider, primarily, professional matters which in the State are, or may be, of National concernment, and to make selections of such as should be carried before the National Board—in short, to do all the work of a State Committee. Each of these State Boards should, once in three years, choose one of the National Councillors, as before mentioned, from their own Board or at large, wherever the best qualified could be found. As in these State Boards the chief preparative work should be done, while its revision and completion should be left to the sober judgment and more deliberate action of the National Board, the National Councillors might have seats in the State Board—without vote—in order that they might know all the arguments and circumstances relating to any case, and the wishes of the State Board, in full, to guide their own action in the National Board.

"The numbers in the several State Boards would be sufficiently large and well proportioned. For a national council seventy or eighty, thus selected, would be ample; and the length of the term of service would enable them to preserve a continuous and consistent plan of work, while half of their number coming new every three years would prevent any lapsing into indifference or negligence. The influence of the State Councils, as indicated, most fully impressing their own wishes and the wishes of their immediate constituents on individual National Councillors, would, though the National Board, give a voice to the profession such as was never before known. It is not necessary to give other details at present; such could be easily wrought out, the plan itself being quite feasible.

"As for 'ways and means,' such could be arranged for without difficulty. The addition of a dollar (or even half of that sum) to the annual assessment in the State Societies, would give more than enough for all expenses, including, if thought best, mileage and pay of the National Board while in session.

"Should the plan work successfully, as we have no doubt it would, eventually the State Societies might, if then thought advisable, without changing name or management in any other respect, become branches, and their Districts sub-branches, of the National organization, retaining all the desirable features now possessed; and thus give to each of their members an additional bond of union with the whole profession in the country, and an additional *title* to the respect of the community at large.

"In such event, the National Council could arrange for general meetings (every year or second year, and in different parts of the country) for all members who might choose to attend. At these meetings there might be orations in medicine, in surgery, and in other departments, reports, communications, discussions, and consideration of other matters of professional interest; while all the evils of the present organization would be avoided, by the exclusion of all matters of business or control, which would continue in the hands of the National Council, and not be agitated at any of these general meetings.

"Under such a system as we have described, there would be no difficulty in getting the right men for these right places for them. To be a member of the State Council would be worthy of the laudable ambition of any aspiring physician; to be one of the National Board would be held by all as the highest professional honor the profession could confer upon eminent talent and well-trying fidelity to its interests.

"Under such a plan the American Medical Association would soon become 'a power' in the land, and connection with it, even as a member merely, an object of just pride with every high-minded and well-educated practitioner throughout the country."

PREVENTABLE DEATHS.

AS conservators of the public health, the medical profession cannot but be concerned in the abatement of every cause of disease or injury, or of the shortening of human life. We are not therefore going out of our province in calling attention to several crying evils which exist in this city.

Twice within a month, in one manufactory, have employes lost their lives by becoming entangled in the machinery.

Not long ago, two men were killed, and one or two others injured, by the falling in of a floor in a building undergoing alteration. Those in charge of the job "thought" there was no danger; they should be held responsible for not making it certain.

Poisons are dispensed and sold in most apothecary shops without any other precautions than such as the proprietors choose to take.

Unripe and over-ripe fruits are sold at every street-corner, to the imminent peril of children and ignorant persons, who buy them because they are cheap.

Cattle are driven through the streets at all hours of the day, and scarcely a week passes without the record in the daily papers of injuries sustained by one or more persons by "mad steers."

All these abuses might be in great measure remedied by fixing the responsibility upon those to whom it belongs. Many "accidents" are in reality the legitimate results of criminal carelessness,—a carelessness fostered by the fact that there exists no law for its punishment, or that if there is such a law it is not enforced. We call upon the profession everywhere, without fear or favor, whenever opportunity offers, to do what they can to protect the public interest in this regard.

SCHOEPPE'S NEW TRIAL.

HOWEVER unworthy "Dr." Paul Schoeppe may be of professional brotherhood (and his record is certainly extremely bad), it is very much to be hoped that his new trial will be conducted on different principles of medical jurisprudence from those which governed the court at his previous arraignment. The absurdity of convicting a man of murder without proving that a murder was committed, seems to need no demonstration.

If the commonwealth cannot produce positive evidence that Miss Stennecke died of poison, no matter how strong the suspicion may be, no matter where the imperfection in the proof may lie, the Scotch verdict "not proven" would be the proper one. We are not sure that the judge would not be warranted in refusing to let the case go to the jury, if there should be a manifest failure on the part of the prosecution to make out this main point.

KITCHEN GARBAGE AND OFFAL.

SOME time ago, the Board of Health made a raid upon the pig-sties on the outskirts of the city, and thought they had done a praiseworthy work in abolishing them. Soon, however, complaints arose that the "slops" (the Philadelphian term), no longer collected for consumption by the pigs, accumulated and became extremely offensive.

To do away with this evil, it appears that the Board have contracted for the removal of the garbage by "strong, tight, and securely covered" carts and wagons, "so driven and managed as that none of the contents thereof shall fall, or leak, or spill therefrom." The drivers are to "give adequate notice, by the ringing of a bell, to the occupants of all buildings such carts and wagons are about to approach," etc. etc.

Garbage is to be removed daily through July, August, and September, three times a week in October, and twice a week in November and December; of the other six months, from January to June inclusive, nothing is said—and we suppose that means that in them nothing is to be done.

Despite the lawyer-like redundancy of these regulations, we cannot but remember the sad fiasco that the Board made in the matter of the street-cleaning, and shall look with interest, not untinged with doubt, for the result of their efforts in this new field.

TRANSLATIONS.

THE TREATMENT OF ECLAMPSIA.

BY JAQUET,

of Berlin.

Translated from the German by W. C. Klotman, M.D., of Baltimore, Maryland.

AS is known, we are not yet agreed whether eclampsia (according to Frerichs and Litzmann) is the result of poisoning of the blood by urinary constituents or by products of their decomposition, and therefore a symptom of uræmia; or whether (according to Traube and Rosenstein) it depends

upon an acute oedema with consecutive acute anæmia of the cerebrum, and especially of the mesocephalon. The view that the eclamptic convulsions are to be regarded as purely reflex, to which the act of parturition is the reflex-exciting irritant, has been set aside, since we know that eclampsia may break out independent of parturition, as well during pregnancy as during the puerperal state. Dr. Courvoisier has recently (1867) proposed the decrease in the amount of albumen contained in the blood as the direct cause of the convulsions. The decrease of the albumen of the blood, which albumen the brain is said to need particularly for its normal functioning, is adduced as explaining especially the delayed eclampsia which occurs during the puerperal state, when the poverty of the blood has reached its highest point, just as it produces the convulsions which are observed a short time before death by hemorrhage.

Now, concerning the first two of the above-mentioned theories of the production of eclampsia, and first of all the *uræmic form*; besides the albuminuria, a retention of organic compounds, destined for excretion, is said to occur and make the blood uræmic, when in a pregnant woman the normal secretion of urine is suppressed or in a great measure limited, from whatever cause,—be it in consequence of a diseased condition of the kidneys, as congestive hyperæmia, a catarrhal or parenchymatous inflammation of them, or in consequence of a compression of the ureters by the gravid uterus. The blood, according to the views of the various investigators, receives the toxic property from the admixture of urea, carbonate of ammonia, and creatine, or creatinine. Yet the upholders of the uræmic theory at the present day regard the *carbonate of ammonia* only as the noxious agent, as Frerichs first proposed. According to the other view, that of Rosenstein, the eclampsia is produced in pregnant women in the same way that Traube explained the occurrence of nervous symptoms in uræmia; *i.e.*, when, in a person that is hydræmic in a high degree, the pressure in the aortic system is suddenly increased, there occurs an acute oedema of the brain; the exudation of serum compresses the blood-vessels, and there is acute anæmia as the result. If this alteration only affects the cerebrum, coma is said to arise; if it extend to the mesocephalon, convulsions take place. These two conditions, hydræmia and increased arterial pressure, are in fact present in every parturient female, and the former in every pregnant female; for if we compare the analysis of the blood of pregnant females, instituted by Regnault and Devilliers, with that of non-pregnant persons, we find in 1000 parts of normal blood, 791 water, 127 blood-corpuscles, 70 albumen, 3 fibrin, and 7 to 12 of soluble constituents; while in the blood of pregnant females, in 1000 parts, there are 810 water, 111 blood-corpuscles, 66.5 albumen, 3.5 fibrin, and 9 parts of salines. The blood of pregnant females, therefore, contains more water and fibrin, and less blood-corpuscles, albumen, and salts; in short, as the decrease of blood-corpuscles altogether concerns the red ones, while the white ones are not only relatively but indeed absolutely more abundant, the blood is hydræmic, or chloroanæmic. If, as is the fact in by far the great majority of cases, albuminuria is superadded to the physiological hydræmia, the impoverishment of the blood must attain a very extraordinarily high degree, and at times it needs but a very slight cause to suddenly increase the pressure in the aortic system in such manner that oedema cerebri is produced. Generally, but by no means always, this increase takes place in consequence of the labor-pains, and becomes very considerable after the draining off of the liquor amni, as then the bearing-down efforts begin.

In the next place, the author, without supporting either one or the other theory, discusses the therapeutical measures recommended by him, which he considers perfectly rational, as well in eclampsia caused by uræmia, as in that caused by acute anæmia. For those who assume uræmia as the etiological force, if they would content themselves with fulfilling the therapeutics of the *indicatio causalis*, might theoretically seek to attain this object in three ways, namely: (1) by preventing the formation of carbonate of ammonia, (2) by neutralizing it and thus making it innocuous, and (3) by striving to remove it instantly from the body.

But the first measure may not be fulfilled before the eclampsia has a fatal termination, and so much the less, since at the present time the place of formation of the urea, as well as the

conditions under which it is converted into carbonate of ammonia, are nearly unknown to us. The attempts to carry out the second measure have likewise been fruitless, as benzoic acid, which was recommended by Frerichs for this purpose, in its course through the organism, is not able to combine with the alkali and render it innocuous, but again makes its appearance as an acid,—namely, hippuric acid. The only expectation of results must therefore be placed in the efforts by which the *carbonate of ammonia can be removed from the blood*. It may well be assumed that this is to be accomplished in the same way in which the urea leaves the organism under normal circumstances, the kidneys and the skin. Both of these organs have almost the same physiological purpose; both excrete water and salts from the body, with only the slight difference, that the kidneys do this incessantly and with tolerable uniformity, and the skin simultaneously regulates the bodily temperature. Each of the two organs undertakes the office of the other, as promptly as this is possible in the animal economy. As soon as the cutaneous activity is suppressed by remaining in a cold atmosphere, the human being urinates more frequently and more abundantly, and when the urinary secretion is entirely suppressed, as in the later stage of cholera, we observe the skin covered with appreciable amounts of crystals of urea at the outlets of the large sweat-glands upon the forehead and nose. Even benzoic acid reappears in sweat as hippuric acid. Hence, where one of the routes, designed for the excretion of urea, has been blocked up, as in uræmic eclampsia, it is certainly rational to attempt the other. This necessity has long since been recognized in the therapeutics of diffuse nephritis and the energetic production of sweat made use of; on the other hand, this has not been sufficiently employed in the treatment of eclampsia.

According to the theory of Traube and Rosenstein, the indications for treatment are (1) the removal of the acute oedema, and (2) the lowering of the aortic pressure. The first object is, as a matter of course, attained by the *abstraction of water*. As the kidneys are not to be depended on, for evident reasons, and it is not in our power to excite pulmonary activity, we are compelled to make use of the *intestinal canal and the skin* for this purpose. As long as the kidneys are only in the condition of hyperæmia, and have not undergone Bright's degeneration, we might certainly act upon both simultaneously without hesitation. But in most cases, when the patient lies comatose and no longer swallows, we cannot make use of internal purgative remedies, and are therefore restricted to the use of enemata and diaphoresis. And the latter, as regards the abstraction of water, in all cases entirely fulfils what is required of it. While ordinarily the body, principally by the evaporation of water, daily loses about $\frac{1}{4}$ of its weight by way of the skin, we can at pleasure artificially increase this amount almost eight times. Now, concerning the lowering of the aortic pressure, its intensity depends upon three factors: (1) upon the strength of the heart's beat, (2) upon the fulness of the vessels, and (3) upon the abundance of the flow towards the capillaries, and the quantity of the secretions.

Everything that weakens the heart's action, diminishes the contents of the vessels, and causes the blood to flow more readily towards the capillaries, reduces the arterial pressure. There is not time allowed in an affection running such an acute course, to give digitalis, since this remedy, as is known, only develops its permanent effects after about twenty-four hours. Venesection is still frequently recommended and employed for reducing arterial pressure, and in fact is decidedly the most reliable measure for this purpose. But if we consider that, upon the one hand, the amount of water lost from the blood, which is the special object here, is already replaced after a half-hour, or at most after a few hours, and, upon the other hand, that the hydræmia is increased thereby to a considerable extent, we shall rarely decide to employ venesection, if we have another remedy in view, which, although it does not act so rapidly, is just as certain. Finally, touching the third way by which we can moderate the aortic pressure, namely, to reduce it by increasing the fulness of the capillaries, this has hitherto been but seldom attempted in the treatment of eclampsia, and yet in the skin we have an organ which is at once abundantly supplied with capillaries and readily accessible to therapeutic interference; the excitation of all the natural secretions, and especially that of the skin, must

certainly reduce the aortic pressure, as the filling of the vessels is reduced to the lowest degree by the continuous abstraction of water.

Accordingly, from a theoretical stand-point of all the methods of treatment, a *vigorous diaphoresis* appears to fulfil the causal indication most fully, as it excretes the carbonate of ammonia from the blood, as well as removes the acute oedema of the brain, and, finally, also reduces the pressure in the arterial vessels.

Now, it is known that eclampsia begins much more rarely after the expulsion of the child than before it, and that in this case it runs a favorable course, because, as Winkel says, "the increased pressure in the aortic system, *post partum*, is generally soon equalized by abundant perspiration and the decided increase of diuresis." Furthermore, among the class of ordinary people we see eclampsia occur to a certain extent epidemically in cold, damp weather, after taking cold, therefore after the sudden suppression of cutaneous activity. Finally, in the clinical history of eclamptic patients with a favorable termination, no matter how they have been treated, we generally note the remark that "the convulsions abated with the breaking out of a profuse perspiration." Even in the case successfully treated by Bellina by means of transfusion, this fact is prominently brought out. Hence the opinion, that in all these cases the breaking out of perspiration does not only accidentally accompany the favorable change, but has actually occasioned it, may not appear to be too hazardous.

For the purpose of exciting the secretion of sweat, the author makes use of the wet packing of the whole body, as employed by Priessnitz. For its application, we need a woollen blanket which is at least seven feet long by six wide, so that the entire body can be completely enveloped. This is spread out upon an ordinary bed, and upon it is laid a sheet of the same size, dipped in cold water of 72.5° F. (18° R.) and then well wrung out. The patient is laid upon this and wrapped in the sheet, and then firmly enveloped in the blanket. The head remains free, and is covered with a bladder of ice or a cold compress. The chest must not be constricted, but it will be well to keep the legs close together. If labor-pains have already begun, and especially if dilatation of the os uteri is well advanced, it will be necessary to wrap the legs separately, so that we need not unwrap the body for the delivery, which latter, if it should cause a sudden suppression of the sweat, will readily cause a renewal or increase of the convulsions. The effects of this mode of wrapping are as follows: during the first two to five minutes, the blood recedes from the periphery to the interior of the body; the skin then appears pale. Ten minutes afterwards, a delightful warmth sets in; the skin reacts to the irritation of the temporary cold, and becomes intensely red. After an hour the secretion of sweat begins, without being preceded by an unpleasant feeling of heat or congestion to the head, such as we commonly observe in perspiring in a dry medium. The want of this phenomenon during the employment of wet wrappings is explained by the fact that water is a better conductor of heat than air, and therefore prevents an unpleasant accumulation of heat in the body. The perspiration now lasts as long as the patient remains wrapped up; it is most profuse during the first three or four hours, but then gradually diminishes. After a few hours, the perspiration amounts to one or more pounds. The convulsive seizures diminish in number and intensity very soon after the breaking out of the sweat. The loud snoring between the paroxysms ceases, and the patient falls into a quiet sleep. Nevertheless, the activity of the pains continues undisturbed, and hence we can allow the patient to lie quiet in her wrappings until delivery has been accomplished. Crampy pains, which are not unfrequently met with in the course of labor in eclamptic patients, seem to be prevented in general by the use of this treatment.

The author has treated eight cases of eclampsia in this manner in his clinic, and with thoroughly satisfactory results. The good effect of the wrapping was unmistakable in all, and several times a favorable result, which had not been attained in spite of the administration of various remedies recommended by others, was due to its employment alone.

The author leaves undiscussed the question, whether the curative effect of the wrappings is to be explained by their antagonism to the etiology of eclampsia, or whether besides

this they also have an antispasmodic action, as in chorea and tetanus, according to Ebert's experience. According to the author, they act in a perfectly innocuous manner under all circumstances, and are as well suited for treating the eclampsia of pregnancy as for the forms occurring during parturition and in the puerperal state. The natural course of pregnancy is *not* interrupted by wet wrappings, as we see in the hydro-pathic treatment of pregnant females with typhus, where they have been used several times in succession at short intervals. An injurious effect is just as little to be dreaded from them in the puerperal state. Finally, their employment does not exclude the use of other remedies, as chloroform inhalations, subcutaneous injections of morphia, and enemata containing chloral hydrate.

Prof. Martin confirms the statements of Jaquet, and asserts that he has long regarded *acute oedema* of the brain as the cause of eclampsia. This oedema can be produced by suppression of cutaneous activity, like common oedema in renal diseases. In this respect damp cold has a peculiarly unfavorable effect upon cutaneous activity. He has several times seen eclamptic seizures occur in pregnant females with and without oedema, after staying in cold rooms or after working in cold water with the arms. In regard to the therapeutics, Martin was led to seek to awaken the cutaneous activity, and especially to the employment of wet wrappings, by the following case, which he observed three years ago.

A vigorous and healthy pregnant female, in the lying-in hospital, had taken cold in rinsing clothes, and during the normal course of delivery, upon the entrance of the head into the lower strait, had an eclamptic seizure, which was followed by a number of others after the termination of labor. In spite of the administration of diaphoretics, the temperature of the very much reddened skin rose to 102.2° F. After the extremities had been wrapped in wet cloths, the attacks ceased, and convalescence followed.

Martin regards this treatment as one very much to be recommended, especially together with the use of chloral hydrate in the form of enemata, as also of chloroform, opium, and morphia. He takes occasion to remark that operative interference during labor, if not otherwise indicated, appears injudicious to him, if it does not terminate the labor without causing great pain.

REVIEWS AND BOOK NOTICES.

ON FOOD: its Varieties, Chemical Composition, Nutritive Value, Comparative Digestibility, Physiological Functions and Uses, Preparations, Culinary Treatment, Preservation, Adulteration, etc. Being the substance of four Cantor Lectures delivered before the Society for the Encouragement of Arts, Manufactures, and Commerce, in 1868. By H. LETHEBY, M.B., M.A., Ph.D., etc., Professor of Chemistry in the College of the London Hospital. Second Edition, Enlarged and Improved. 12mo, pp. xvi., 255. New York, William Wood & Co., 1872.

As we see from the title of this book, it is intended to embrace between its covers a large amount of information. It presents a mass of gleanings from many sources. It cannot pretend to be original, but shows the results of much careful reading. The value of such a work would be greatly enhanced if implicit confidence could be placed in everything that is announced as a fact; but, unfortunately, our author, like the rest of mankind, is not infallible; for instance, on page 17, in a really important chapter on the nutritive value of various articles of food, we find the following paragraph in the article upon Indian Corn:

"The grain is said to cause disease when eaten for a long time and without other meal, the symptoms being a scaly eruption upon the hands, great prostration of the vital powers, and death after a year or so with extreme emaciation. These effects have been frequently observed among the peasants of Italy, who use the meal as their chief food; and the sallow, weazen look of the natives of the Northern States of America is thought to be due to the indigestible preparations of Indian corn called mush, hominy, or johnny, which constitute the chief portion of their daily meals."

The existence of such assertions as the foregoing must raise doubts in the reader's mind as to the amount of credence to be given to anything that he may find in the book; but, after making all allowance for such errors, the work still remains of very great value, and contains much information that is necessary to the physiological physician, and to obtain which would, without the possession of this little volume, cost much time and research.

In considering the nutritive value of food, a series of tables are given showing the proportions of nitrogenous and carbonaceous principles; and in arranging the relative values, both of these, as well as the cost, are considered.

The article on the functions of nitrogenous food and the source of muscular power is the result of prolonged observation and thought, and contains several new ideas. None of the recent researches in the physiology of food are noticed, and American observers are entirely ignored. A few interesting observations and deductions are given respecting the choice of food by different nations and classes of workmen, and the effects of the food upon their powers and characters are given.

DISEASES OF THE THROAT: a Guide to the Diagnosis and Treatment of Affections of the Pharynx, Œsophagus, Trachea, Larynx, and Nares. By J. SOLIS COHEN, M.D., Lecturer on Laryngoscopy and Diseases of the Throat and Chest, in Jefferson Medical College, Philadelphia, etc. etc., 1872. 8vo, pp. 582, with 133 Illustrations. W. Wood & Co., New York.

A most thoroughly practical work, bearing upon every page unmistakable evidences of the author's acute powers of observation and the zeal with which he has prosecuted the study of laryngoscopy ever since its discovery. The term "Diseases of the Throat" is not restricted, as ordinarily, to affections of the larynx and trachea, but is made to comprise those of the contiguous parts—œsophagus, pharynx, and nares. It is on the latter subjects, especially, that the author furnishes the reader with much new and original information, besides presenting the views of others collected from various inaccessible sources.

In the preliminary chapters will be found, discussed in a clear and concise manner, the various methods of making the examination of the throat, whether by laryngoscopy or auto-laryngoscopy, demonstro-laryngoscopy, infra-glottic laryngoscopy, œsophagoscopy, or rhinoscopy. There will be found illustrations of the various appliances requisite for the examination, be it made by direct or reflected light,—sunlight or artificial illumination. The author gives a decided preference to some form or other of Tobold's condensing apparatus. The anatomical and histological descriptions of the larynx, without being very elaborate, give all the most important and latest researches in this direction.

The succeeding chapters are devoted to the consideration of "sore-throat," the exanthemata, diphtheria, syphilitic sore-throat, of adults—of infants, membranous sore-throat; as to the latter affection there often must be some doubt as to its nature, even with the aid of the laryngoscope, hence the author recommends that "the safest plan for the practitioner would be to treat it as if it were diphtheria." "There is nothing to be lost if the case should turn out to have been only common membranous sore-throat; and everything will have been gained should it turn out to be diphtheria." Dr. Cohen holds the view that diphtheria is of a parasitic origin, and that it is essentially a poisoning of the blood. The use of parasiticides is strongly recommended; sulphurous acid water, in the form of spray, applied every few hours, being most highly extolled. Carbolic acid has also been found very efficacious.

Special affections of the tonsils, of the palate and uvula, of the frontal sinus, form the topics of several very interesting and instructive chapters; but want of space compels us to hasten on to a brief notice of Chapter X., "special affections of the pharynx," one of the best and most carefully prepared articles in the entire volume.

A veritable *terra incognita* is opened up here to the eyes of the profession, in the descriptions of the adenoid tissue of the vault of the pharynx and of the *bursa pharyngea*. The illustrations from Luschka are admirable.

Glandular hypertrophy at the vault of the pharynx, and the frequently resulting true adenomata, are comparatively new subjects, first pointed out by Meyer of Copenhagen. The fossa of Rosenmüller is frequently obliterated by a mere inflammation of the mucous membrane, or as a result of hypertrophy of the glandular tissue.

The unique views of the orifices of the Eustachian tubes, and of the glandular tissue at the vault of the pharynx, as given in several cases of cleft palate, will, no doubt, be of the greatest aid to the student in forming a conception of the anatomical relations of these parts.

Frequent allusion is made to the liability of diseases invading and spreading along the Eustachian tube. "Inflammation of the pharyngeal mucous membrane covering the tube may be very easily propagated around its edges into the interior of the tube, and thus lead to deposits and accumulations of mucus or lymph, which by their mere presence, or by producing organic obstruction, prevent a maintenance of due atmospheric pressure on both sides of the tympanic membrane, and thus lead to impairment of hearing, from disease of the tube or of the middle ear itself."

Retro-pharyngeal abscess, as an affection, occurs most frequently in children; it is apt, from the similarity of some of the symptoms, to be confounded with croup: the following is given as the basis for a differential diagnosis.

"The existence of an abscess of this kind may be suspected in a child when attacked by frequent suffocative paroxysms, similar in many respects to those encountered in croup, but not exhibiting the same distinctness of remission. The restlessness of the patient, and the actual obstruction to respiration, is said to be greater than that witnessed in croup; and the relief to respiration afforded by the sitting posture may be taken as another indication of the nature of the disease. The voice is not affected as it is sometimes in croup, there being no impediment to the free vibration of the vocal cords. Pressure upon the parts always produces pain, which is not the case in croup," etc., etc.

The next chapter is devoted to the subject of affections of the œsophagus, and is remarkably complete. Chapter XII. treats of the affections of the nasal passages. It is to be regretted that the author has not entirely abandoned the meaningless "ozæna," a term merely denotive of a characteristic symptom.

Thudichum's nasal douche is frequently recommended: "care must be taken that the solution be warm, and of a specific gravity near that of the blood."

Excitation of the Schneiderian membrane by the passage along it of the constant galvanic current has proved very successful in cases of anosmia.

To Dr. Cohen belongs the credit, if not of discovering, at least of first calling the attention of the profession to very remarkable and not very rare instances of sub-mucous infiltration at the sides of the vomer, which, when viewed rhinoscopically, from their position and whitish color, might be very readily mistaken for polypi. Incision into the swollen mucous membrane, or even excision and cauterization of the edges, must often be resorted to in this obstinate affection.

A great deal of space is of course devoted to the affections of the larynx and trachea, together with full descriptions and illustrations of the most approved laryngeal apparatus that is required in their treatment.

"The author discards altogether the notion of any distinct disease to be called *laryngeal phthisis*, whether it be the tuberculous ulceration of the laryngeal mucous membrane, . . . or whether it be the extensive ulcerative chondritis and perichondritis of the older authors. It is altogether doubtful if ever a case existed in which tuberculous disease was confined to the laryngeal structures."

Dr. Cohen differs from Mackenzie and others, who hold that both phthisis and syphilis appear to exercise a decidedly antagonistic influence to the development of new formations. He claims to have met with a large proportion of cases in which distinctly-formed growths, of circumscribed outline, and often of tolerably large size, existed in cases of phthisis. In a table of sixty-six cases occurring consecutively in the author's private practice during the last five years, eight cases are put down as distinctly traceable to syphilitic congestion of the laryngeal structures, and twenty-two tumors occurred in

patients with phthisis. The greater number of these laryngeal new growths occurred in the male. The period of life at which they were observed most frequently is perhaps between twenty-five and forty-five years of age. Papillomata are by far the most frequent variety; forty-eight of the author's sixty-six cases were judged to be of this character. The papillomatous growths of phthisis are said to be very apt to recur, their favorite seat being upon the intra-arytenoid folds; when thus situated, and in phthisical cases, it can be no easy matter to determine whether they are merely the harmless papillomata, or whether they are not the fimbriated and oedematous margins of some hidden meso-arytenoid ulcer.

Appended to the volume are very copious references upon subjects treated of in the text, admirably arranged under "catch-heads:" it is certainly the most complete and convenient mode of reference ever devised.

We hope that the foregoing extracts will have been sufficient to give the reader some idea of the book, and that it may have interested him sufficiently to induce him to a careful perusal of it. In conclusion, we cordially recommend it as the best treatise extant on the subject. To facilitate the study of the rhinoscopic and laryngoscopic images of the various pathological conditions, we hope to see in subsequent editions the substitution of chromo-lithographs for the less satisfactory woodcuts.

LECTURES ON THE PRINCIPLES AND PRACTICE OF PHYSIC.

By Sir THOMAS WATSON, M.D., F.R.S. From the Fifth Revised and Enlarged English Edition. Edited, with Additions, etc., by HENRY HARTSHORNE, A.M., M.D. 2 vols. 8vo, pp. 1872. Philadelphia, Henry C. Lea, 1872.

A work of such world-wide celebrity needs at this late day but few words of criticism. It has for so many years occupied a deservedly prominent position as a text-book for the guidance of the student and the practitioner, that its merits are generally known and need not be again enumerated. The American editions have seemed to demand occasional additions to the original text, to adapt them to "the different aspect of some diseases upon this side of the ocean, and the greater relative importance of certain topics," and we therefore find incorporated in the present volumes not only most of the comments and remarks of Dr. Condie in the American edition of 1858, but also annotations by Dr. Hartshorne, and references to American theories and modes of practice. The charm of the author's lectures has always been the beauty, terseness, and elegance of the language employed. We are glad, therefore, to find, as stated in his "Epilogue to the Reader," at the end of the second volume, that he has felt unable, and indeed unwilling, to recast, in his study, their style and character. "I have," says the writer, "fed the pleasant fancy that I was still sitting in the Professor's chair, with my flock of juvenile students before me." This, as he himself remarks, has led to anachronisms, which are, however, easily detected by the English reader, and have been generally commented upon in the American edition.

The work is issued in the best style of its publisher, being much more satisfactorily perused and referred to in its present two-volume edition.

LEHRBUCH DER GEBURTSHÜLFE. Von Dr. KARL SCHRÖDER: dritte neu durchgearbeitete Auflage. Bonn, Cohen & Sohn, 1872.

(MANUAL OF OBSTETRICS. By Dr. KARL SCHRÖDER. Third Revised Edition. Bonn, Cohen & Son, 1872.)

The translation of Niemeyer's Practice, Stricker's Histology, and Rindfleisch's Pathological Anatomy, has done much to make the profession in this country familiar with the most advanced views in these special branches, as developed by the most prominent of the German medical authors. With regard to obstetric teaching, however, we have been obliged to rest content with imperfect translations of short articles, and modified theories as presented to us by English authors, with scanty recognition of the source from which they were obtained. One reason for this is the fact that for some time past the best original work in this special branch has been scattered through the different magazines and archives, or has appeared in the form of fragmentary publications, so that the names of those who have really done the most to advance

the science of obstetrics are scarcely known outside of Germany. Hence it was, that until the appearance of Prof. Schröder's book, Nägele's Obstetrics, written nearly thirty years ago, still held, beyond doubt, the first place, and, with the addition of Dr. Greuser's foot-notes, represented the present stand of obstetrical teaching, regarded as a whole, better than any work written within the last ten years. For, strange to say, each new author, and they were numerous, ignored the fact that great and important advances had been made in physiology and pathology, which rendered a complete revision of transmitted theories absolutely necessary, and the result was the successive production of text-books, such as Scanzoni's, Hohl's, Braun's, Martin's, Lange's, and many others, each one of which contains valuable suggestions and improvements in the mechanical portion of obstetrics, so that the mere mention of any one of these names suggests at once to any one familiar with the progress of this branch, some new instrument, or valuable modification of those already in use, or the development of some special operation; but no one of these men ventured to leave the beaten track, and construct a text-book which should represent the present state of the science of obstetrics.

This Schröder has done, and of necessity, inasmuch as the experimental study of the Physiology and Pathology of Gestation and Parturition is of recent growth, his work cannot be a finished whole, but must present many gaps and spaces, of the existence of which the author confesses himself painfully conscious. No attempt is made, however, to conceal the wanting facts and observations, but the attention of the reader is rather drawn to these points, so that he too may participate in the pleasure of contributing by his own individual observation to the completion of the science as a whole. This spirit pervades the whole work, and the interest of the student is constantly awakened by new suggestions and subjects for original research. In order, however, that special investigations may not be undertaken without the knowledge of how much has already been accomplished, and how much remains to be done, each chapter is introduced by a full list of the German and foreign literature on the subject, while, in many cases, abstracts of the views of the most prominent writers on questions which are still undecided are introduced in small type, to avoid confusion. The general division of the book into physiology and pathology has not been rigorously adhered to; in several chapters, when the author has felt that a practical advantage could be gained by grouping together certain conditions which have a common symptom, depending, however, upon a different cause, he has not hesitated to avail himself of this method of treating the subject: for instance, hemorrhage becomes so important and vital a symptom, that, in order to present to the student a clear and sharply-defined clinical picture of its value, this symptom is considered separately as occurring before, during, or after labor. So, too, that entire group of symptoms, affecting lying-in women, and having in common their septic origin and tendency to a pernicious course, are considered under the head of puerperal fever, and there results an admirable description of the clinical history and pathological anatomy of this terrible disease.

In the portion of the work devoted to operative obstetrics, the indications for each operation, its comparative danger to the mother and child, and the time of operating, are carefully considered; the description of the various instruments and the details of the operation are given, however, with great brevity. The explanation of this is found in the fact that in all the German schools attendance on practical courses on operative obstetrics is required, before the student is allowed to register his name among those to whom the cases which occur in the wards and the Polyclinic are assigned in turn. In these private lectures each student is made thoroughly familiar with the "technik" of each operation, and, by constant practice upon the maternal cadaver, acquires considerable manual dexterity, before he is allowed to perform any operation upon the living subject. No accuracy of description, no careful delineation of instruments, can take the place of this practical study, to the value of which Schröder bears the most decided testimony.

In the treatment of puerperal eclampsia, the author admits the fact that by free venesection the vascular tension may

be so diminished that the spasms cease; but is led to decide against the use of the lancet, by the consideration that the quantity of blood is the same a short time after as before the venesection, for the vessels everywhere greedily absorb the serum from the surrounding tissues, while the quality has been deteriorated by the bleeding, and hence the two conditions are secondarily produced, to which the eclamptic spasm owes its origin. Schröder, therefore, substitutes for the lancet complete narcotism, effected either by chloroform, or, better still, by morphia, although the tension in the vessels is notably diminished by the use of the first agent, as has been experimentally proved. In reply to this argument, it may be urged that venesection is employed as a vital necessity, in order to avert the pressing danger which each new spasm brings with it, while, by repeated venesections, if necessary, the pressure may be continuously reduced until delivery has been accomplished, and the cerebral congestion attending the violent bearing-down effects no longer exists, or until permanent depletion is brought about by drastic cathartics and diuretics.

An English translation of the book is soon to be published, and it is a significant fact that before its appearance some of our largest universities have already adopted it as the textbook. Its general introduction will be productive of great benefit to the profession, for its influence will be felt, not only in widely disseminating the most recent scientific opinions in this special branch, but also in stimulating and encouraging original thought and investigation.

ON WINTER COUGH, CATARRH, BRONCHITIS, EMPHYSEMA, ASTHMA: a Course of Lectures delivered at the Royal Hospital for Diseases of the Chest. By HORACE DOBELL, M.D. New and Enlarged Edition. 8vo. Philadelphia, Lindsay & Blakiston, 1872. Pp. 238.

The handsome new edition of this useful work is a decided improvement on that which preceded it. Delayed in its issue by the inability of its author to isolate himself from the claims of professional practice, it gains for that very reason added importance as embodying the results of a fresher experience. Several new chapters have been added, and the whole work thoroughly revised, with the attractive embellishment of new colored plates, and an index "prepared by the best index-maker in London," which errs, we think, on the side of minuteness, if that be possible. The newer portions of the work treat of Neglected Winter Cough, and the interdependence of this affection with other diseases, while it is evident, even from a hasty glance through the pages of this second edition of Dr. Dobell's treatise, that the additional matter inserted by him under the heads of "Artificial Respiration," "Post-Nasal Catarrh," "Laryngoscopy," "Ear Cough," etc., are of great practical utility, though the amount thus added is not so extensive as the Preface might induce us to expect. The space devoted to Laryngoscopy, for instance, only covers nineteen lines, and is scarcely more than sufficient to tell us that "laryngeal and tracheal catarrh are as easily diagnosed by the stethoscope as by a laryngoscopic examination." The work is written in a pleasant, readable, colloquial style, and this will partly account for its success. Independent, too, of its intrinsic merits, the title is a taking one, much more so, indeed, than if the author had merely, in the caption of his book, announced that he was about to travel the well-beaten high-roads of Emphysema, Bronchitis, etc., in which Winter Cough is, after all, only a conspicuous guide-post.

BOOKS AND PAMPHLETS RECEIVED.

On Food: its Varieties, Chemical Composition, Nutritive Value, Comparative Digestibility, Physiological Functions and Uses, Preparations, Culinary Treatment, Preservation, Adulteration, etc. Being the substance of four Cantor Lectures delivered before the Society for the Encouragement of Arts, Manufactures, and Commerce, in 1868. By H. Letheby, M.B., M.A., Ph.D., etc., Professor of Chemistry in the College of the London Hospital. Second Edition, Enlarged and Improved. 12mo, pp. xvi., 255. New York, William Wood & Co., 1872.

The Treatment of Venereal Diseases: a Monograph on the Method pursued in the Vienna Hospital, under the Direction of Prof. Von Sigmund, including all the Formulæ. By M. H. Henry, M.D., Surgeon to the New York Dispensary—Department of Venereal and Skin Diseases, Fellow of the New York Academy of Medicine, etc. etc. Adapted and Arranged from the German. 8vo, pp. 49. New York, William Wood & Co., 1872.

The Ten Laws of Health; or How Disease is Produced and How it can be Prevented. By J. R. Black, M.D. Small 8vo, pp. 322. Philadelphia, J. B. Lippincott & Co., 1872.

GLEANINGS FROM OUR EXCHANGES.

GUN COTTON AND ITS PREPARATIONS (Charles H. Mitchell, in an inaugural essay published in the *American Journal of Pharmacy*, June, 1872).—A number of experiments were tried, with a view of ascertaining the relative proportions of cotton and acids, together with the proper time for maceration necessary to produce a cotton which should combine the largest yield with the highest explosive power and solubility. The following formula was at length adopted:

Raw Cotton	.	.	.	2 parts
Carbonate of Potassa	.	.	.	1 "
Distilled Water	.	.	.	100 "

Boil for several hours, adding water to keep up the measure; then wash until free from any alkali, and dry. Then take off—

Purified Cotton	.	.	.	7 oz. av.
Nitrous Acid,* s. g. 1.42	.	.	.	4 pts.
Sulphuric Acid, s. g. 1.84	.	.	.	4 "

Mix the acids in a stone jar capable of holding two gallons, and when cooled to about 80° Fahr., immerse the cotton in small portions at a time; cover the jar, and allow to stand four days in a moderately cool place (temp. 50° to 70° Fahr.). Then wash the cotton in small portions, in hot water, to remove the principal part of the acid; pack in a conical glass percolator, and pour on distilled water until the washings are not affected by sol. chloride barium; drain and dry. Yield, 11 oz. av.

This cotton is perfectly white, of a harsh, gritty fibre, very explosive, leaving scarcely any ash; soluble in ether, ether fortior, acetic ether, glacial acetic acid, and in a mixture of alcohol and ether varying from one part ether to three parts alcohol to pure ether itself. If a cotton superior to this is desired, it may be obtained by treating this cotton with an additional proportion of the mixed acids, washing, and drying as before. The cotton gains about one per cent. in weight, becomes perfectly soluble, and is so free from any ash as to scarcely scorch a sheet of white paper it may be burnt on. Both this and the previous gun-cotton may be ignited on gunpowder without exploding it. The advantages claimed for this cotton over that of the U.S.P. are that it is perfectly soluble, very explosive, cheap, its manufacture is much more easy, requiring but little time and attention, and turning out a superior product with large yield and less cost.

The subject of collodion next claims our attention, it being the most important pharmaceutical preparation of gun-cotton. The applicability of gun-cotton in ethereal solution to the dressing of wounds, inflamed surfaces, etc., was first made known by Dr. Horace Maynard, of Boston. Its valuable properties soon commanded attention, and at once supplied a want long felt in the medical profession. No better formula for collodion can be found than that of the U.S.P. Using the cotton prepared as before mentioned, it left nothing to be desired.

Collodion can also be made the vehicle for other medicines. Only those remedies which are used externally, of course, can be administered in this manner. Having made a number of experiments on this subject, I present the following formulæ, several of which I think are new:

* Nitric, saturated with nitrous acid.—Ed. *Amer. Jour. Pharm.*

STYPTICS.

Styptic Collodion.

- R Tannin, ℥ij,
Stronger alcohol, f℥iv,
Stronger ether, f℥xij,
Soluble cotton, ℥j ℥ij,
Canada balsam, ℥j.

Introduce the cotton into a suitable bottle, pour on it two fluidounces of alcohol, shake well; then add ten fluidounces of the ether, agitate frequently until dissolved. Dissolve the tannic acid in a mixture of the remainder of the alcohol and ether, mix with the first liquid, add the balsam, allow to stand until clear; then pour off.

Collodion with Sesquichloride of Iron.

- R Sesquichloride of iron, ℥j grs. iv,
Stronger alcohol, f℥iv,
Stronger ether, f℥xij,
Soluble cotton, ℥j grs. iv.

Into a suitable bottle introduce the cotton, pour on two fluidounces of the alcohol, and shake well; then add the ether, and agitate frequently until dissolved. Dissolve the sesquichloride of iron in the balance of the alcohol; mix with the prepared collodion.

ANODYNES.

Collodion with Aconite.

- R Pulv. aconite root, ℥ij,
Ether, f℥vj,
Soluble cotton, ℥j grs. iv,
Stronger alcohol, q. s.

Mix the ether with two fluidounces of alcohol, moisten the aconite with one fluidounce of this, pack in a percolator and percolate with the balance, pouring on q. s. alcohol to recover eight fluidounces, in which dissolve the cotton.

Collodion with Belladonna.

- R Powdered belladonna root, ℥ij,
Ether, f℥vj,
Alcohol, q. s.,
Gun-cotton, ℥j grs. iv.

Mix the ether with two fluidounces of alcohol, moisten the belladonna with one fluidounce of this, pack in a percolator and percolate with the balance, pouring on q. s. alcohol to recover eight fluidounces, in which dissolve the cotton.

ANTISEPTICS AND DISINFECTANTS.

Collodion with Carbolic Acid.

- R Carbolic acid, ℥j,
Ether, f℥vj,
Stronger alcohol, f℥ij,
Gun-cotton, ℥j grs. iv.

Dissolve the gun-cotton in the ether and alcohol mixed, and then add the carbolic acid.

Collodion with Sulphocarbonate of Zinc.

- R Sulphocarbonate of zinc, ℥j,
Ether, f℥vj,
Stronger alcohol, f℥ij,
Gun-cotton, ℥j grs. iv.

Introduce the cotton into a suitable bottle, add one fluidounce of alcohol, shake well; add the ether, and agitate frequently until dissolved. Dissolve the zinc salt in the balance of the alcohol, and mix with the prepared collodion.

Collodion with Thymol.

- R Thymol, ℥j,
Ether, f℥vj,
Stronger alcohol, f℥ij,
Gun-cotton, ℥j grs. iv.

Dissolve the cotton in a mixture of ether with part of the alcohol, dissolve the thymol in the balance of the alcohol, and mix.

STIMULANTS IN CUTANEOUS DISEASES.

Collodion with Iodide of Mercury.

- R Iodide of mercury, ℥j,
Iodide of potassium, ℥ss,
Alcohol, f℥iv,
Ether, f℥iv,
Gun-cotton, ℥j grs. iv.

Triturate the iodides together in a mortar, add the alcohol

boiling, and rub until they are completely dissolved. Then add the gun-cotton, lastly the ether, and agitate frequently until the cotton is all dissolved.

STIMULANTS AND RUBEFACIENTS.

Collodion with Arnica.

- R Pulv. arnica, ℥iv,
Ether, f℥xij,
Stronger alcohol, q. s.,
Gun-cotton, ℥ij grs. viij.

Mix the ether with four fluidounces of alcohol. Moisten the arnica with q. s. of this, pack in a percolator, and pour on the balance, following with alcohol until sixteen fluidounces of tincture have been recovered; to this add the cotton, and agitate frequently until dissolved.

Collodion with Capsicum.

- R Grd. capsicum, ℥iv,
Ether, f℥xij,
Stronger alcohol, q. s.,
Gun-cotton, ℥iss grs. x.

Proceed as in collodion with arnica, recovering sixteen fluidounces of tincture, in which dissolve the gun-cotton.

Collodion with Mezereon.

- R Mezereon, ℥iv,
Ether, f℥xij,
Alcohol, q. s.,
Gun-cotton, ℥ij grs. viij.

Mix the ether with four fluidounces of strong alcohol, and in this allow the mezereon to macerate one week. Drain, pack tightly in a conical percolator, pour on the separated liquid, and follow with enough alcohol to recover sixteen fluidounces of tincture, in which dissolve the cotton.

Collodion with Savin.

- R Powd. savin leaves, ℥iv,
Ether, f℥xij,
Alcohol, q. s.,
Gun-cotton, ℥ij grs. viij.

Proceed in the same manner as collodion with capsicum.

Collodion with Black Pepper.

- R Grd. Blk. Pepper, ℥iv,
Ether, f℥xij,
Alcohol, q. s.,
Gun-cotton, ℥ij grs. viij.

Proceed in the same manner as in collodion with capsicum.

VESICANTS.

Collodion with Cantharides.

- R Powd. cantharides, ℥iv,
Ether, f℥xij,
Stronger alcohol, q. s.,
Gun-cotton, ℥ij ℥j.

Moisten the cantharides with a small portion of the ether, and pack in a conical percolator. Then pour on the balance of the ether, mixed with four fluidounces of alcohol, and follow with enough alcohol to recover sixteen fluidounces, in which dissolve the gun-cotton.

These collodions can be used as substitutes for many of the official plasters, having the advantage of occupying a small bulk, ready adaptability to any surface, and powerful therapeutic action.

I have endeavored, as far as possible, to give some practical information on a branch of pharmacy of which comparatively little is known. The subject is, I think, an important one, since gun-cotton and collodion occupy a high position in both medicine and the useful arts, and to its elaboration and useful application too much study cannot be devoted.

THE ACTION OF HOT BATHS IN DROPSY (*Jahrb. für Kinderk.*, N. F. iv. 317: by Steffen).—Hot baths are adaptable to all ages, even the tenderest (that is, baths of 28° R. heated to 33°–34° while the patient is immersed, with subsequent sweating of two to three hours). In weakly individuals, however, the repetition of the baths must not be at too short intervals, because after the last bath the decrease of the amount of fluid from the weight of the body often lasts of itself one or more days. Indications for these baths are found in diffuse transudations into the cellular tissue, free extravasations into the abdominal cavity, in the pleura and pericardium;

in the latter case, where the serous collection has not reached too high a grade. If the transudations are the result of a depressed vital condition, or of persistent intestinal catarrh, they will disappear with appropriate treatment without hot baths; but in a high grade of fluid collection the baths expedite the cure. Pilz has spoken (*C.-Bl. Med. Wiss.*, 1870, 491) of their good effects in the dropsy of scarlatina. The collections of fluid are more difficult of dispersion when dependent on pathological changes in certain organs. A permanent disappearance can then be expected only when at the same time the fundamental organic disease is relieved. Still, even here the hot baths are of marked benefit, not only because they give the patient temporary relief, but also by hindering, as much as possible, an excessive accumulation of fluid, and thereby avoiding or postponing a fatal termination. Among the pathological processes which lead to effusions, and against which, with more or less effect, Dr. S. has employed hot baths, we may specify, besides the dropsy of scarlet fever, simple nephritis with marked albuminuria and voiding of fibrous cylinders in the urine, chronic affections of the liver and spleen, and chronic diseases of the heart. As decided contraindications to be observed are: the presence of fever, and therefore the majority of diseases in their acute form, affections of the brain and its membranes, inflammatory exudations and transudations in the pericardium, marked depression of the vital strength, and, finally, the commencement of oedema of the lungs.

CHOLERA.—According to the *Wiener Med. Presse*, the schools and gymnasia in Kamenez-Podolski and Kiev were closed in June on account of apprehensions of this disease. A general panic prevailed among the people. Advices from Odessa reported numerous cases of cholera (hitherto so called), now regarded as true cholera, and terminating fatally; and the cholera has broken out in the Chersonese. In Malta, a ten days' quarantine is ordered for all persons coming from Constantinople. In Kiev, the chief city of the Ukraine, the epidemic was daily increasing in extent and severity. On the 12th and 13th of June, there sickened 404 persons with it, of whom 189 died. From the breaking out of the disorder to the 14th of June, there had been 1317 cases and 532 deaths. Among the pilgrims going to the Orthodox Convent in Kiev, who during the summer swarm from every part of Russia, the epidemic was most violent.

ON THE CHEYNE-STOKES RESPIRATORY PHENOMENON (Merkel; from *Deutsch. Arch. f. klin. Med.*, viii. pt. 47).—The phenomenon occurred after an apoplectic attack with paralysis of the left side, in December, 1869, in a man forty-seven years old, emphysematic, anæmic (with hemorrhoids), and with rigid radial and temporal arteries. "The breathing was at first somewhat superficial, then increased in depth without increasing in frequency up to the greatest dyspnoea, in which all the auxiliary muscles of the neck and face were fixed. After this had lasted from thirty to forty-five seconds, a complete pause in the breathing occurred of about twenty to thirty seconds, during which the pupils were contracted and immovable. Then the surface-breathing again appeared, and the play began anew." The hemiplegia improved, the peculiar respiratory phenomenon had decreased after a few days, with the exception of slight indications, but these persisted.

Towards November, 1870, after several months of feeling ill, the phenomenon again arose, and gradually increased to a terrible persistency. In the first weeks of December there were here and there pauses of as long as a quarter of an hour, when the patient was able to eat, but towards Christmas these also disappeared, and there was literally not fifteen minutes' rest by day or night. The consciousness was retained during the dyspnoea, the patient answered with effort to questions, but during the apnoea he became completely stiff, and stared with contracted pupils, although the eyes remained quiet. With the beginning of the respiratory act, the pupils enlarged and then reacted. Spasms of the facial muscles occurred during the final twenty-four hours. Death occurred with tracheal râles on the 29th of December. Injections of morphia increased the disturbance. Chloral hydrate, which gave several hours of rest, was soon rejected.

Post-mortem after twenty-four hours: skin strikingly pale, moderate emaciation, marked cadaveric rigidity, scalp very

compact. Sinuses of the dura mater empty; the arteries of the base excessively rigid, their inner coat much corrugated; in the coats were hard and partly calcareous deposits up to one mm. in thickness and two mm. in length, which contracted the calibre to a minimum. The soft coverings of the brain were very delicate; their arteries also quite rigid and tortuous. The brain was strikingly empty of blood; the medulla pure, white, and hardened. In the lateral ventricles only a few drops of serum. At the edges of the optic thalami and corpora striata was a serous cyst of the size of a lentil with rusty red flattened walls. In the middle of the pons three similar cysts of the size of a hemp-seed with unsoftened surroundings. Cerebellum and medulla oblongata normal. The lungs largely emphysematous, and almost entirely covering the heart. Much oedema of the lungs. Moderate bronchial catarrh. Very slight fatty degeneration of the hypertrophied and dilated heart. General and knobby thickening of the inner coat of the aorta; no calcareous deposits. Rigidity of all the medium-sized arteries, with but slight calcareous deposit. Granular atrophy of the kidneys.

MISCELLANY.

THE LATE DR. A. H. FISH.—At a special meeting of the Medical Board of Charity Hospital, held August 6, 1872, the following resolutions were adopted as expressive of the feelings of the Board in regard to the death of one of their members, Dr. A. H. Fish:

"Whereas, It has pleased an All-wise Providence to remove from our midst by death our friend and colleague, Dr. A. H. Fish, be it therefore

"Resolved, That we, the Medical Board of Charity Hospital, express our heartfelt sorrow at his death, earnestly believing that our loss is his gain.

"Resolved, That the Secretary be instructed to express our warmest sympathy with the family of the deceased in their affliction, and that a copy of these resolutions be forwarded to them, and be published in the medical journals."

DISCOVERY OF ANÆSTHETICS.—According to the *Journal of Applied Chemistry*, chloroform was first made by Mr. Guthrie, a druggist, of Sackett's Harbor, N. Y., in 1831. He called it chloric ether. Liebig in Germany, and Soubeiran in France, subsequently discovered it, and a claim for priority has been set up for each of them.

Dr. R. H. Collyer, of London, states, in the *Medical Times and Gazette*, that he published in 1843 accounts of operations done by him on patients rendered insensible by the "inhalation of narcotic and stimulating vapors;" and therefore that he can justly claim to have anticipated Wells, whose "first essay with nitrous oxide only dates from December, 1844."

We regret to see a statement in the *Medical Record* that the Strangers' Hospital in New York has been closed for want of funds. The Commissioners of Charities and Correction contemplate purchasing it for an accident hospital.

DONATIONS AND BEQUESTS TO MEDICAL INSTITUTIONS.—The Middlesex Hospital in London received in February last £20,000, the proceeds of the sale of paintings and works of art which had belonged to the late Mr. Broderip, who had expressed a wish that they should be so disposed of. He had, during his lifetime, made a donation of similar amount to the institution.

The *Lancet* says, "It is announced that a gentleman has offered to give £10,000 towards the establishment of a convalescent institution at Morecombe, near Bradford."

LETTERS received from Professor Gross mention that he intends leaving Liverpool for home on the 24th of September. Professors Da Costa and Agnew will, we believe, return somewhat sooner.

DEATH OF DR. BELL.—Dr. John Bell, one of the oldest physicians in this city, died at his residence in South Broad Street on the 19th of August, after a very long and tedious period of failing health.

AMERICAN OPHTHALMOLOGICAL SOCIETY.—In order to enable the members of this society to attend the International Congress in London, its meeting, which was to have been held at Newport, R.I., early in August, was postponed until the third Thursday in July, 1873.

HABITUAL DRUNKARDS.—REPORT OF PARLIAMENTARY COMMITTEE.—The "select committee appointed to inquire into the best plan for the control and management of habitual drunkards" have made a report, from which we gather that they have examined constables, magistrates, coroners, inspectors of insane asylums, managers of reformatories, physicians and surgeons from different sections of Great Britain, and Dr. Parrish of this city, with his colleague, Dr. Dodge of Binghamton, N.Y., and have presented to the House of Commons the result of their careful and deliberate inquiry.

A few points of their report will be noticed as follows:

"An entire concurrence of all the witnesses in the absolute inadequacy of existing laws to check drunkenness.

"That small fines and short imprisonments are useless.

"That occasional drunkenness frequently passes into the condition of a disease uncontrollable by the individual.

"That self-control is suspended, or annihilated.

"That this is confined to no class, condition, nor sex, and hardly to any age.

"That the moderate use of alcoholic liquors is unattended by any bad effects, while there is much to prove that excess in ardent spirits is far more deleterious than similar excess in wine or beer.

"That it is in evidence that there is a very large amount of drunkenness among all classes and both sexes, which never becomes public, nor is dealt with by the authorities, but which is probably even a more fertile source of misery, poverty, and degradation than that which comes before the police courts.

"That there is a difference between the paroxysm of intoxication and insanity proper, so distinct as to forbid the plea in bar of punishment that an offence was committed while drunk; still, placing inebriates in lunatic-asylums is improper and should not be allowed.

"That when acts of violence or other offences are superadded to the drunkenness, the ordinary punishment awarded by law to those offences should be carried out, and committal to a reformatory may form part of a sentence, or it may be left to the discretion of the magistrate to send him at once to an inebriate reformatory.

"That sanatoria or inebriate reformatories are producing considerable good in effecting amendment and cures in those who have been treated in them."

The committee recommend that sanatoria or reformatories for those who, notwithstanding the plainest conditions of health, interest, and duty, are given over to habits of intemperance so as to render them unable to control themselves and incapable of managing their own affairs, or such as to render them in any way dangerous to themselves or others, should be provided: that these should be divided into two

classes,—private for those who can pay their own way, and public for those who cannot.

Various collateral recommendations are embodied in the report, and an appendix accompanies it, containing a correct report of all the evidence.

The following gentlemen constitute the committee: Mr. Donald Dalrymple (chairman), Sir Harcourt Johnstone, Mr. Birley, Mr. Henry Samuelson, Mr. Wharton, Dr. Lyon Playfair, Mr. Akroyd, Mr. Mitchell Henry, Lord Claud John Hamilton, Mr. Miller, Mr. Downing, Major Walker, Mr. William Henry Gladstone, Mr. Cloncy Read, Colonel Brise.

PROF. ESMARCH, of Kiel, whose first wife was a daughter of Stromeier, has recently married the Princess Henrietta of Schleswig-Holstein.

PROF. TRAUBE, says the *Lancet*, has finally been assigned to a chair in the University of Berlin, having been only "extraordinary professor," teaching without a regular appointment. The reason given for his being kept out of such a position is that the late Minister (of Public Instruction?) Von Mühler would not overlook the fact of Traube being a Jew.

HYDROPHOBIA FROM SKUNK-BITES.—The daily papers have recently contained reports of two cases of this kind. One is said to have occurred in the West, about six weeks ago, and the other at Newburg, N.Y., in the latter part of July.

EPIDEMICS.—Telegraphic advices state that an epidemic disease, having some features in common with yellow fever, is raging at Carthage, five thousand persons having been attacked, with, however, only 200 deaths, or 4 per cent. of the cases.

Both in Peru and Chili smallpox is said to be prevailing. More than one-half of 1500 deaths which occurred in Valparaiso during the month of June were from this disease.

Much excitement has recently prevailed among the people of Staten Island, on account of the anchoring in their neighborhood of the Spanish iron-clad Numancia, having three cases of yellow fever on board. She was finally removed, and anchored off the S.W. Spit. We have heard of no spread of the disease on shore.

Two other vessels arrived in New York on the 14th of August, having yellow fever on board. They were both quarantined in the lower bay.

METEOROLOGICAL.—According to the records kept at the Pennsylvania Hospital, the mean temperature of the month of July of this year was 82.30°; the mercury having reached the highest point, 98°, on the 1st, 2d, and 3d days of the month, and the lowest, 69°, on the 20th. The rain-fall was 11.215 inches; a somewhat unusual amount.

DR. MIFFLIN WISTAR, a son of Dr. Caspar Wistar the elder, the second Professor of Anatomy in the University of Pennsylvania, and brother of the late Dr. Caspar Wistar, died in this city on the 19th ult., in the 63d year of his age. He had long since retired from active life.

DR. WHATELY'S AND SYDNEY SMITH'S REMEDIES.—After ages of experiment and experience, the art of curing is still such an uncertain art that thousands might say, as the poor invalid said, "I never took a remedy, but I've had lots of physic." Dr. Whately could have said just the contrary. He did not take lots of physic, but had a remedy, nevertheless, that stood him in good stead at all times and seasons. A gentleman making an evening call at Redesdale, when the snow lay two feet thick upon the ground, was much scandal-

ized at beholding an old man in shirt-sleeves hard at work felling a tree, while the sleet drifted pitilessly in his wrinkled face. Upon expressing his surprise that the archbishop should let an old laborer work in such fashion, he was astonished to learn that the poor fellow exciting his wrathful pity was the archbishop himself, getting rid of a headache in his usual way, which was to throw off his coat, lay hold of an axe, and rush out-of-doors and belabor some stout old trunk till he found himself perspiring freely; when down went the axe, and off went Dr. Whately as hard as he could tear to his bedroom, to wrap himself up in his newest blankets, go to sleep, and arise by-and-by "as fresh as a four-year-old." Sydney Smith prepared for all eventualities by devoting one side of a room to a collection of medicines, on the efficacy of which he plumed himself not a little. "There's the Gentle-joy, a pleasure to take it; the Bull-dog, for more serious cases; Peter's Puke and Heart's Delight,—the comfort of all the old women in the village; Rub-a-dub, a capital embrocation; Dead-stop settles the matter at once; and Up-with-it-then needs no explanation. This is the house to be ill in; everybody who comes here is expected to take a little of something. I consider it a delicate compliment when my guests have a slight illness. We have contrivances for everything. If you have a stiff neck or a swelled face, here is this sweet case of tin, filled with hot water, and covered with flannel, to put round your neck, and you are well directly. Likewise, a patent tin shoulder in case of rheumatism. There you see a stomach-tin, the greatest comfort in life; and, lastly, here is a tin slipper, to be filled with hot water, which you can sit with in the drawing-room should you come in chilled, without wetting your feet." Sydney Smith had almost as much faith in hot water as Burke, only he was for its external use; some of his contrivances might certainly be generally adopted with advantage. Scott's Ashestiel blacksmith, who, upon the strength of a little veterinary skill, set up for a doctor of human kind in a small English town, was a man of few remedies. As he told Sir Walter, his practice was very sure, and perfectly orthodox, for he depended entirely on "two simples." "And what may they be?" asked Scott, with some curiosity. "I'll tell your honor," said Lundie; "my two simples are just laudamy and calamy!" "Simples with a vengeance!" exclaimed the poet. "But do you never happen to kill some of your patients, John?" "Kill? Ou, ay, maybe sae! Whiles they die, and whiles no; but it's the will o' Providence. Onyhow, your honor, it wad be lang before it makes up for Flodden?" That last touch went straight to Scott's heart, we may be sure. Johnnie Lundie was not quite so frank with the unlucky victims of his orthodox practice; frankness with them would have been unprofessional. It would, perhaps, be a change for the better if European doctors could imitate the plain-speaking Chinaman, Li Po Sai, who, when called in by a Californian gentleman, after the usual examination, said, "I think you too much dance, too much eat, too much goot round. If you dance, you no get better; too much eating no good; too much gooting round no good. Good-by!" Dared our medical advisers be as honest as our Chinese brother, drugs would be at a discount indeed; but then it is just possible the registrar-general might be able to show a cleaner bill of health.

PHYSICIANS IN PENNSYLVANIA.—According to the revised Census returns, the number of physicians and surgeons in this State is 4843. The other learned professions are less numer-

ously followed,—there being only 3841 clergymen, and 3253 lawyers.

THE UNIVERSITY HOSPITAL.—Work has been commenced in levelling and grading the lot in West Philadelphia, bounded by Thirty-fourth and Thirty-sixth and Spruce and Pine Streets, on which the new University Hospital is to be erected. \$200,000 has been subscribed for the hospital, besides a grant of \$100,000, which was obtained from the State Legislature. The building will be complete in all the details necessary for a first-class hospital. The new University is nearly complete, and the fall term of studies will be commenced in the new building.

JEEFERSON MEDICAL COLLEGE.—We are informed that the project of a hospital in connection with this school is being fostered with much energy. No one as yet knows, we believe, whether the trustees will buy up properties adjacent to the present college building, and erect the hospital there, or whether they will transfer the school to some other point. Both plans are spoken of, and each seems to us to have certain advantages.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending		
	Aug. 10.	Aug. 17.	Aug. 24.
Consumption	31	42	60
Other Diseases of Respiratory Organs	16	20	14
Diseases of Organs of Circulation	11	19	13
Diseases of Brain and Nervous System	44	69	74
Diseases of the Digestive Organs	45	53	32
Diseases of the Genito-Urinary Organs	6	8	4
Zymotic Diseases	28	41	31
Cholera Infantum	101	104	69
Cancer	5	3	7
Casualties	13	17	16
Intemperance	3	7	0
Sunstroke	1	8	13
Old Age	12	15	14
Syphilis	0	1	2
Stillborn	13	11	21
Suicide	2	1	0
Marasmus	46	36	30
Unclassifiable	45	39	25
Unknown	0	1	1
Totals	422	495	426
Adults	142	203	201
Minors	280	292	225

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM AUGUST 5 TO AUGUST 19, 1872, INCLUSIVE.

- EDWARDS, L. A., SURGEON.**—By S. O. 187, War Department, A. G. O., August 13, 1872, leave of absence further extended thirty (30) days.
- BROOKE, JOHN, ASSISTANT-SURGEON.**—By S. O. 84, Department of the Columbia, July 24, 1872, relieved from duty at Camp San Juan Island, and ordered to Sitka, Alaska, for duty as Post Surgeon.
- PHILLIPS, H. J., ASSISTANT-SURGEON.**—By S. O. 84, Department of the Columbia, July 24, 1872, relieved from duty at Sitka, Alaska, and ordered to report in person to the Medical Director of the Department.
- O'REILLY, R. M., ASSISTANT-SURGEON.**—By S. O. 71, Military Division of the Missouri, August 3, 1872, leave of absence extended thirty (30) days.
- CARVALLO, CARLOS, ASSISTANT-SURGEON.**—By S. O. 184, A. G. O., August 9, 1872, leave of absence extended fifteen (15) days.
- GIRARD, A. C., ASSISTANT-SURGEON.**—By S. O. 140, Headquarters Department of Texas, August 10, 1872, granted leave of absence for thirty (30) days on surgeon's certificate of disability.
- WILSON, A. D., ASSISTANT-SURGEON.**—By S. O. 151, Department of the East, August 12, 1872, to report to the Commanding Officer, Fort Warren, Mass., for temporary duty.

MONDAY, SEPTEMBER 16, 1872.

ORIGINAL LECTURES.

CLINICAL LECTURES

ON INHERITED SYPHILIS.

BY JOHN S. PARRY, M.D.,

One of the Attending Accoucheurs to the Philadelphia Hospital, etc.

LECTURE II.

GENTLEMEN:—The subject of inherited syphilis engaged our attention when I last had the pleasure of meeting you; and, as that topic was by no means exhausted upon that occasion, I shall return to it this morning. The first case which I have to show you to-day is a very interesting one, because it furnishes a good representation of what is said to be a rare syphilitic lesion.

Case V.—Inherited Syphilis; Rupial Eruption on the Forearm; Dactylitis Syphilitica.—Mary W., colored, aged 11 years. Her father is a healthy man. Her mother had no other children. Her mother died when Mary was eight weeks old, and is said to have been intemperate and to have led a loose life. She (the mother) suffered from skin-eruptions before death, but no other account of syphilis could be obtained. During infancy, Mary was a very puny child, but we have no positive information in regard to her condition. When she was two years old, she had an eruption on the skin, which her grandmother says appeared as large red blisters, which afterwards became white and broke, when thick crusts formed over them. When these scabs were removed, there were ulcers beneath them. This eruption became general, and was accompanied by oval, elevated patches about the vulva, which, from the grandmother's description, were mucous patches.

She was first admitted to the hospital in May, 1870. At that time there was some enlargement of the lymphatic glands upon the right side of the neck, while the left shoulder, arm, and forearm were covered by well-developed rupial crusts.

These were the remnants of the skin-disease which appeared when she was two years old.

After remaining in the hospital for nearly a year, she was discharged without being improved. In December, 1871, she was readmitted. Some months before this time (the exact date cannot be determined) some of the fingers on her left hand began to swell, and when she was admitted her middle and ring fingers were much enlarged and very tense. In the middle finger the induration did not extend beyond the first phalangeal articulation, but it involved this with the proximal phalanx. In the ring finger the induration extended beyond and involved the most of the second phalanx. The swelling was firm, but not painful, and the affected part was not hotter than the surrounding surface. The rupia was gradually extending downward, and she now had a crust upon the back of the hand.

Present condition, May 29, 1872.—Upon various parts of the body she presents scars of the previous skin-disease. The angles of the mouth are fissured and puckered. On the left cheek is a large rupial crust. The left forearm and back of the hand are covered with the crusts and cicatrices of rupia. The former are from one inch to two inches in diameter. The proximal phalanges of the middle and little fingers of the left hand, and the phalangeal articulation of the former, are much swollen. This is more manifest upon the dorsal than upon the palmar surface, and the former is broader than the latter. The skin over the affected parts is tense, the folds in it are effaced, and the mobility of these fingers is much impaired. The child does not complain of pain in them. They may be firmly pressed or moved without objection upon her part. There is no crepitation in the movement of the joints. The

outlines of the phalanges are defined with difficulty, owing to the firmness and tenseness of the swelling, but they appear to be slightly thickened, though it is evident that the increase in the size of the fingers is mainly due to disease of the tissues between the skin and the bones. The hand applied to these parts detects no elevation of temperature. The ring finger is much shortened, so that its distal extremity reaches just beyond the proximal phalangeal articulation of the middle finger. It is a quarter of an inch shorter than the little finger. This deformity is due to destruction of the whole of the proximal phalanx. The metacarpal extremity of the middle phalanx has been destroyed, as well as a small part of the distal end of the metacarpal bone itself. In consequence, though she retains but little control over it, the mobility of the member is very great. The nails on all the fingers are perfect and healthy.

The bridge of the nose is not depressed. She has commencing interstitial keratitis in one eye. Her teeth are moderately well formed, but the upper central incisors are imperfectly developed and slightly notched.

The symptoms of this patient are minutely described, because the condition of the hand is said to be a rare one. There can be no doubt that the girl has congenital syphilis, although the history is not positive in regard to it. But, without any direct investigation of this point, I do not hesitate to accept this view of the case, because the teeth are imperfectly developed, and she has commencing interstitial keratitis.

I shall not say anything in regard to the rupial eruption upon the forearm and dorsal surface of the hand, because, striking as this may be, and interesting as it is in connection with the congenital disease, my colleagues of the surgical staff can show you better examples of it in cases of acquired syphilis. But I do direct your especial attention to the appearance of the fingers, the description of which you now have the opportunity of verifying for yourselves. This lesion of the hand is known as dactylitis syphilitica, and occurs in the later stages of both the inherited and the acquired disease. The first description of this curious condition was written by Chassaignac, in 1859; but the most elaborate account of it was published by Dr. R. W. Taylor, of New York, in the *American Journal of Syphilography and Dermatology* for January, 1871. Before that time, only five cases of the disease had been fully described. To this number Dr. Taylor added two others. Since then, Dr. Smith, of Ohio,* and Dr. Wigglesworth, of Boston,† have each reported a case. Mr. Morgan, of Dublin, in his recent work,‡ describes the affection, and mentions having met with three cases of it.

This girl presents what seem to be the ordinary characters of dactylitis. I call your attention to the fact that the swelling involves but a part of the affected fingers,—that is, the proximal phalanx and its phalangeal articulation. You notice, too, that the swelling of the dorsal is greater than that of the palmar surface of these, so that upon transverse section the cut surface would present an imperfectly triangular outline. From the history which has been read to you, you have learned that the disease of the fingers has existed for some time. She has been quite six months under observation, and we have reason to believe that it had been progressing for two months before she entered this hospital. In the only other case of syphilitic dactylitis that I have had the opportunity of observing, it has run the same chronic course; and Dr. Taylor likewise speaks of this peculiar chronicity of the disease. Its progress seems to be but little influenced by treatment. Another interesting feature of this case is, that the affection

* *American Journal of Syphilography and Dermatology*, Jan. 1872.

† *Ibid.*, April, 1872.

‡ Practical Lessons in the Nature and Treatment of Contagious Diseases, London, 1872, p. 231.

of the fingers seems to produce but little suffering. You see how I handle them, and how little she complains. During the whole of the last six months you would never have known from the child herself that anything was the matter with her hand, though during that time some of the bones of the ring finger were destroyed. The same peculiarities characterized another case of dactylitis, which I shall presently show you.

Some of you, no doubt, suppose that this condition is due to disease of the bones of the fingers, or, in other words, that the child has suffered from nodes of the phalanges. Such is by no means the case. In reading the history I particularly emphasized the statement, that the outlines of the phalanges of the middle and ring fingers could be defined with difficulty, but that the swelling did not appear to be due to any disease of these bones. Dr. Taylor describes two forms of this manifestation of syphilis, one of which seems to begin in the bone and the other in the connective and fibrous tissues of the part. This case appears to belong to the latter class, though, if the truth be told, the two varieties are but stages of the same condition. It seems to be a form of gummy tumor, the morbid material of which is produced in the connective and fibrous tissues of the fingers. In some instances, as in this one, the swelling involves only one phalanx; in others, it affects the whole finger, increasing its size uniformly; while in still others, the swelling is confined to the joints in the early stages of the disease. Nor does dactylitis affect the fingers alone; for it sometimes attacks the toes.

Though the bone may not be involved in the first stages of the disease, dactylitis may lead to its destruction; and indeed it has done so in this girl, for you see that the ring finger is shorter than the little one, so that it can be freely moved backwards and forwards, and that it presents a peculiar wrinkled appearance, which is due to destruction of the whole of the proximal and a portion of the metacarpal extremity of the middle phalanx. Precisely the same condition is represented in the next patient, whom I show you as an example of recovery from dactylitis syphilitica.

Case VI.—Inherited Syphilis; Dactylitis Syphilitica; Hutchinson's Teeth.—W. H. H., aged 10 years, colored, has been an inmate of the hospital from infancy. Five years ago he suffered severely from nodes on the humerus, ulna, and other parts of the body, with dactylitis, which suppurated after a long period of inactivity, and destroyed the whole of the proximal phalanx of the ring finger on the right hand. The disease is now entirely inactive, but the affected finger is a mere stump, which scarcely reaches the second joint of the little finger.

In both of these children you see that the dactylitis has appeared as one of the late manifestations of inherited syphilis. This is not always true; for Taylor quotes the case of Archambault,—an infant in whom this was one of the early symptoms of the disease. Dr. T. C. Smith since then described a case* in which dactylitis set in when the infant was only six weeks old. These are probably the only examples of the kind upon record; for Taylor, when he wrote, in January, 1871, believed Archambault's case to be unique.

From what I have said, you have been led to infer that dactylitis syphilitica is a rare affection. This is the opinion of Dr. Taylor; but I may say that my colleague, Dr. Maury, tells me that it is his opinion that Taylor has exaggerated its rarity. Dr. Maury tells me that he has seen a large number of these cases, both among persons having acquired and those having congenital syphilis.*

While I have this patient in the room, I desire to direct your attention to another symptom of inherited syphilis. It is one which has attracted a good deal of

attention recently. If you inspect this boy's mouth, you find that the incisor teeth are imperfectly developed, and that their free extremities are notched, and smaller than the bases of the teeth. To Mr. Hutchinson is due the credit of pointing out the significance of this physical sign. Now, these are not typical examples of Hutchinson's teeth, which, when perfect, are smaller, more notched, and have more contracted crowns than these have. You see, too, that the adjoining teeth of the upper, and the middle ones of the lower jaw, present the same peculiarities in a slight degree; but you must remember that it is not among these that you are to seek for these alterations. Mr. Hutchinson has insisted upon the fact that the permanent central incisors of the upper jaw are the ones which are valuable for diagnosis, and you must further remember that he attaches no importance whatever to the various other irregularities in the position and shape of the teeth, which so often occur. The peculiarities to which I have alluded are important, viz.: First, instead of the free edge of the crown of the tooth being the broader, as it is normally, the widest portion is next the gum. Second, the free margin is notched or crescentic. These teeth are rarely present in more than one of the same family of children, and this is usually the one first born with congenital syphilis.

This symptom is wanting in several of the patients who have been before you. In this one (Case V.), M. W., the teeth are by no means perfect, but the alterations are not characteristic,—only sufficient to arouse suspicion of congenital syphilis. In Case II., E. H., the teeth are likewise imperfect.

While in Case IV., P. K., they are large and well developed, his sister (Case III.) has not yet cast her milk-teeth. From what I show you this morning, you see that there is no uniformity in the presence of Hutchinson's teeth; and, to state briefly my own convictions in regard to the matter, I would say that, so far as my present experience shows, these dental changes, when they are present, are absolutely pathognomonic of congenital syphilis, but that they are often absent. It is another element which will aid you in diagnosis, but which, like all other prominent symptoms of disease, is sometimes unavailable, because it is not present. This last fact is easily accounted for if Mr. Hutchinson's view of its causation is correct. He believes it to be due to inflammation of the alveolar process of the jaw, and, just as it is with iritis, keratitis, and various other conditions, the disease may run its course without the inflammation being developed.

Before dismissing the consideration of the symptoms of congenital syphilis, I wish to impress upon your minds the fact that the tertiary lesions, of which you have seen such striking examples, are by no means common. It is exceedingly rare for bone-disease to occur during infancy. I have only once met with it in a child under two years old; it was in a boy of about fifteen months.

When Diday published his work upon infantile syphilis (New. Syd. Soc. ed., London, 1859), he stated that there were not upon record more than half a dozen authenticated cases of syphilitic bone-disease in infants. Mr. Hutchinson relates another (*loc. citat.*, p. 185).

There is a question connected with this disease which is very interesting, and at the same time very important in its practical bearings. The first patient whom I showed you undoubtedly inherited syphilis from her mother. The same is true of two others; while the histories of the remainder are indefinite upon this point. In none have we any direct account of the father having transmitted the disease. This in hospital practice is the ordinary history; but you must not accept this as conclusive, for it must be manifest to you that we have to contend with many difficulties in obtaining a correct

* *Amer. Jour. Syphilol. and Dermatology*, Jan. 1872, p. 33.

account of the origin and progress of disease in many of our little patients. Still, I am inclined to believe that the influence of the two parents in the transmission of the affection differs, and I am convinced, from the diverse statements of authors upon this point, that the subject demands reinvestigation. For example, Mr. Hutchinson (*loc. citat.*, p. 208) holds that a child will inherit syphilis in as severe a form from the father as from the mother, and I believe that I am not misstating the truth when I say that this is the opinion of most other authorities. On the other hand, Prof. Boeck (*American Journal of Syphilography and Dermatology*, Jan. 1870, p. 16) states that the disease is rarely, and Mr. Cullerier (*Mém. de la Société de Chirurgie*, tome iv., and *Archives Générales de Méd.*, Sept. 1854) believes that it is never, transmitted from the father to the child. A recent and very able writer on this subject, Mr. Morgan, of Dublin (*Contagious Diseases*, etc., 12mo, London, 1872), thinks that the influence of the father has been much exaggerated.

I have for some time availed myself of every opportunity to try to obtain information upon this subject, and, while I may subsequently have to modify my opinions in regard to it, I cannot but believe that the mother is much more likely than the father to transmit syphilis to the children, and that, as Mr. Morgan says, the influence of the father has been exaggerated. On the other hand, I do not want you to understand me as saying, with M. Cullerier, that syphilis cannot be inherited from the father. I cannot at present commit myself to any such doctrine; for I have seen more than one sad instance in which men *seem* to have begotten syphilitic children.

It is important that you should inform yourselves thoroughly upon this subject, for gentlemen who have been relieved of secondary symptoms will hereafter consult you in regard to the propriety of marriage. Every physician with any experience can point to numerous examples of this kind. It becomes you, therefore, to be able to give a reliable opinion in regard to it; and I beg you, I beseech you, gentlemen, to remember that when a man has once had constitutional syphilis, you cannot in the present state of our knowledge say positively that he will not procreate a diseased child, no matter if he seems to have fully recovered. You may feel assured that he probably will not, and, more, you may be certain that the probabilities are reduced to a minimum, but, as we now understand these matters, you are not justified in giving a positive opinion in regard to this subject. If a man has once had constitutional syphilis, we do not doubt that under certain circumstances the poison may be eradicated so far as to prevent his begetting a diseased child; but we have as yet no reliable means of judging when this is the case.

If your opinion be asked upon this important question, it is your duty to give it clearly and truthfully, without regard to the feelings of your patient. It is your duty to yourselves, to your interrogator, and to his prospective children. But when you have told him all this, you have only performed a portion of your work. You have seen only one side of the dark picture. This is a cloud which has no silver lining. Not only is a man who is affected with constitutional syphilis to be told that he may transmit the disease to his children, but he is likewise to be informed that his wife may contract it from him, or from the child in her womb, and that he may in the future have to bear the terrible trial of seeing her suffer from secondary and tertiary syphilis.

I know that there is not one of you who will not shrink from such a trying position as this is. With a human being before you in whose heart burn the same passions, the same loves and hates, that move you, you will feel tempted to put the case in the most favorable light.

But, gentlemen, tell the simple truth, remembering the delicacy of your position and the dignity of your calling,—remembering that in your decision are involved the life and comfort of unborn children, the health and happiness of a woman who is about to give her heart's best treasures into another's keeping.

The study of the etiology, and the laws which govern the transmission, of hereditary syphilis is one of the most interesting and important subjects in connection with the disease. Its elucidation, however, is attended with many difficulties. These are increased by the existing disagreements among surgeons and physicians in regard to the acquired affection. This varies much in different cases, both in severity and the order of succession of symptoms. The severity and type of the disease in the child are no doubt influenced by these circumstances in the parent. They are, we have every reason to believe, as potentially influenced by the time which has elapsed after the infection of the parents, or by the treatment to which they have been submitted. Where so many elements enter into the consideration of a question, and where their proper appreciation depends so much upon the judgment of the observer, the subject cannot but be surrounded with many difficulties. These are increased, too, by the moral and social peculiarities of the case. Though the disease has set its stigma upon either the parent or the child, the former will often hesitate a long time before acknowledging the truth in regard to it. A man or a woman who would scorn to tell an untruth in regard to anything else will persist in the most unblushing falsehoods in relation to any sexual disorders. And again, the physician, when he sees the first evidences of syphilis in the child, may sometimes hesitate about making inquiries about its origin, for so marvellously perfect is the assumption of ignorance and innocence in these cases that if he had not known the parties before, he might hesitate in questioning either parent, for fear of creating domestic difficulty. If any of you ever have such doubts as these, if the surroundings of your patient are such that you have misgivings as to which may be the guilty party, do you quietly bide your time, and satisfy yourselves in the interval with properly treating your patient. The chances are that in a little time a troubled conscience will bring one of the parents to you with some unaccountable story, and it is ten to one that this will be the father.

All of these things, I say, make the subject of the transmission of inherited syphilis a very difficult one for investigation; but the interests at stake are so great that it must ever possess a deep importance for the intelligent physician. I alluded, a moment since, to the influence of the father and the mother in the transmission of the disease, and, if you remember, you were told it was my own opinion that that of the father had been much overrated. At that time I quoted the observations of Prof. Boeck and M. Cullerier in support of this opinion. I desire to say a little more in regard to it before proceeding to the consideration of other matters, though I wish you distinctly to understand that I do not want to lessen the force of the advice which I have before given you. The data upon which the profession bases the opinion that the father may be the source of syphilis in his children do not appear to be small, if one peruses the works of the older authors upon the subject. Some of these cases are related in such a straightforward way that it seems almost impossible to doubt the conclusions which have been drawn from them. One thing is noticeable, however, that the same illustrations have been used over and over again, and the conclusions which have been arrived at have been handed down from one author to another, while few new facts have been added to support them. M. Cullerier's observations, however, have led to original research upon this point. This author reported

the cases of two gentlemen who married in the active stage of secondary syphilis. They each had one child, both of whom were healthy, up to the time when last seen, one aged eighteen, and the other fifteen years. M. Notta (*Archives Générales de Médecine*, March, 1860) relates the histories of eleven syphilitic fathers who had nineteen children. The wives of three of these were likewise affected. Among the nineteen children *only four had inherited syphilis, and these were all the children of the infected mothers.* The men whose wives were healthy had fifteen children, the youngest of whom was seven months and the eldest fifteen and a half years old at the time M. Notta wrote.

M. Charrier (*Archives Générales de Médecine*, Sept. 1862) records the histories of fourteen additional children, the offspring of seven fathers. In five instances the father had syphilis and the mother was healthy, in one they were both, and in the other the mother only, was diseased. Of the fourteen children, nine were healthy, and *these were the offspring of infected fathers.* Of one of these the age is not given. Of the others the youngest was eight months, and the eldest six years. Of the five diseased children, three were born to the pair both of whom had secondary syphilis, while the wife whose husband was healthy aborted twice, the fœtus being diseased in both cases. To these cases may be added two of my own. The history of the first of these is as follows:

Case VII.—A gentleman contracted a chancre six years ago. It was cauterized with nitrate of silver within thirty-six hours after its appearance, and this cauterization was repeated upon two successive occasions, at intervals of twenty-four hours, without any medical advice. He then presented himself to me, and the sore had all the characters of a true Hunterian chancre. It healed soon, and in three months afterwards he had copper-colored, slightly scaly spots upon his forehead, trunk, and extremities. These symptoms were followed by sore throat, when he was at once put upon anti-syphilitic remedies. He soon recovered, and married immediately afterwards. His wife shortly became pregnant, and within a year a child was born, who was healthy until five years of age, when I last heard from it. Immediately after his marriage, this gentleman suffered from a faint eruption upon his skin, and from sore throat, which one of the most eminent syphilographers of this city pronounced to be specific, and upon one occasion since then he was under my care for syphilitic maculæ and sore throat, which were relieved by specifics.

This history seems to be a clear one; but the following patient suffered much more severely:

Case VIII.—A gentleman contracted syphilis in 1861. He neglected himself, and travelled a long distance before he sought medical advice. In the fall of 1862, he was in a most deplorable condition, being wasted almost to a skeleton, having nodes upon various parts of the body, while the nose and hard palate were entirely destroyed. Under the use of specific remedies he gradually improved; but he was not entirely well until four years later. Six years afterwards he married, and in 1869 I attended his wife, a perfectly healthy woman, in her first and only confinement. This issue, a fine boy, is now nearly three years old, and is perfectly healthy.

To sum up now, gentlemen, we have the history of thirty children, two from Cullerier, fifteen from Notta, nine from Charrier, and two cases of my own, all of them the offspring of syphilitic men who had married healthy women. Not one of these inherited the disease. This number might be increased by several others, but I forbear, as their histories are not so clear as those which have been related; but, in view of these facts, I ask you if it is any wonder that I feel inclined to doubt the opinions of the eminent authorities who think that the father's influence in the transmission of the disease is as strong as that of the mother.

There is one source of error in estimating the in-

fluence of the father. It is now generally acknowledged by syphilographers, and is, I believe, demonstrated beyond possibility of doubt, that secondary syphilis is transmissible from one person to another. Zeissl says he has noticed that "as a rule women whose husbands suffer from latent syphilis lose their blooming health, even if they have never been pregnant or had any miscarriages," and Balfour has put upon record a series of cases of healthy women, the wives of syphilitic husbands, all of whom bore diseased children. All of these wives, however, suffered from undoubted symptoms of secondary syphilis, which manifested striking peculiarities. It was by no means severe, came on shortly after the commencement of pregnancy, and in some disappeared without treatment. One of the most important points connected with this form of the disease is, that it may escape the notice of the physician. Balfour, as you may see by reading his paper in the *Edinburgh Medical Journal* for 1856, vol. ii., attributes these symptoms in the mother to her absorption of the poison from the fœtus; but, so far as I am able to judge, this is not yet proved; and is it not possible that their syphilitic husbands gave them the disease at or near the time of impregnation? The intimacy of marital relations must certainly subject the wife to dangers which arise under no other conditions, and they are so great that I cannot but feel that this source of the mother's contamination has to be eliminated before we can implicitly accept the doctrine that a syphilitic father can transmit the disease to his child. Dr. Van Buren, of New York, has recently recorded a case (*American Journal of Syphilography and Dermatology*, Jan. 1870) which bears upon these observations of Zeissl and Balfour, especially upon those of the former. It is so interesting and important that I cannot forbear giving you an abstract of it. A man had chancres on three separate occasions, the first time in the winter of 1854-55, the last time in the spring of 1857. He never had any secondary symptoms, and married a perfectly healthy woman in August, 1858. In a little more than nine months, their first, and in June, 1860, their second child was born, and neither has presented any evidences of inherited syphilis. Now comes the instructive part of the history. In October, 1860, a little more than two years after their marriage, Dr. Van Buren was consulted on account of certain vague syphilitic symptoms in the wife, while in 1861 the husband had syphilitic retinitis, though no mention is made of previous constitutional manifestations. A third child, born in 1862, showed evidences of inherited syphilis in three weeks; while a fourth, born in October, 1867, escaped.

The two facts in this account, to which I wish to direct your attention, are, that a husband with latent constitutional syphilis of which there had never been any obvious signs, not even of cachexia, communicated the disease to his wife, and that his children did not inherit the disorder until the wife had become diseased. These facts certainly give great force to the remark which I made a few moments since, that the part which the father plays in the transmission of syphilis is very uncertain. The matter must remain undecided until the subject has been re-investigated, and more facts collected from which to draw conclusions.

The cases which I have shown you suggest another question for our consideration. I cannot doubt that the stage of the syphilis in the mother influences the production, and modifies the severity, of the disease in the child. If you review the histories of two of the patients whom I have shown you, and who are again before you this morning, you will find that an attempt has been made to determine the condition of the mother at the time of conception.

In Case I., J. W., the mother had never had any tertiary symptoms, though the secondary manifestations

had been severe. At the time she conceived, the disease was perfectly quiescent, so that during and since her gestation she has considered herself perfectly well. Yet you see that the disease appeared in the child within two weeks after his birth; but I would have you notice that it is not at all severe. In the second patient, E. H., syphilis was inherited from the mother, who at the time of conception was probably between the second and third stages of the acquired disease. I have spoken in these lectures of a child in whom congenital syphilis made its appearance after the end of the first year, and whose mother, during gestation, and for a considerable period before it, had had no acute symptoms, though she was greatly disfigured by tertiary bone-lesions.

These facts show you that the condition of the mother influences the development of syphilis in the child, and, more, a fact which has been questioned by some writers upon this subject, that a woman who has some time before suffered from the last symptoms of the tertiary stage may still endanger the life and happiness of her offspring by its transmission. However, I am not inclined to think that such children will always be contaminated. Now, nearly two years ago there was a woman delivered in the ward who had suffered extremely from constitutional syphilis, but who had had no acute symptoms for at least five years. So serious had the disease been, that her hearing was destroyed, her eyesight impaired, her nose much disfigured, and the hard palate perforated. During her gestation I watched her with much interest, thinking that she would be likely to bear a syphilitic child; but it was born healthy, and continued so until he was eighteen months old, when he died of malignant measles, which was epidemic in the children's asylum during last winter. The father in this instance was a healthy man.

There is another question connected with the transmission of syphilis from the mother to her child which we may discuss before considering the treatment.

The following is the history of the patient who is now before you:

Case IX.—L. A., aged 19, was a perfectly healthy girl until two months before her child was born, which was nine months ago. At this time she contracted chancres. Four months later she had well-developed secondary syphilis. She is now covered with copper-colored blotches, a squamous eruption, and has a sore throat. She has nursed her child until the present time. It was born healthy, and was perfectly well until two weeks ago, when a papular eruption appeared upon its belly, back, buttocks, and thighs. This was dark-colored,—decidedly coppery,—and was attended by a little coryza. There were no other evidences of any disease in the child, who is very lively and very strong.

If you will notice this baby, gentlemen, you will see that she is rather remarkable for development and strength, and that she presents absolutely no evidences of disease besides those which I have mentioned. In this the child furnishes a striking contrast to her mother, whose pale, cachectic, downcast face would soon attract attention, while a very cursory examination would reveal the cause of her difficulty. You would say that a child thus born could hardly escape having syphilis, and possibly some of you feel convinced that this is a specific eruption. If you are, I must tell you that I do not by any means feel sure that you are correct. It is true that this eruption looks as if it were syphilitic. Its color, so far as that is of any value, is suspicious, and its association with coryza still more so; but it is doubtful whether this will not prove an evanescent eruption. This opinion is based upon the fact that the mother did not have constitutional syphilis at the time she conceived. Writers assert that a woman, who contracts the primary disease at or after the seventh month of utero-gestation, will not transmit it to her offspring.

Diday (*Infantile Syphilis*, New Syd. Soc. ed., 1869, pp. 30, 31) has collected eleven cases in which the mother was infected during pregnancy, and from the analysis of these he concludes that syphilis contracted by the mother after the completion of the seventh month, has never produced the disease in the child. I am strongly inclined to believe, therefore, that this is not the eruption of congenital syphilis, for, according to the girl's account, pregnancy had advanced fully seven months when she contracted the primary disease.

You see at once the importance of obtaining accurate information upon this point, because, if the opinion expressed by Diday be true, we can without danger give these children to another woman to be wet-nursed,—a consideration of no little importance to them. I am willing to confess, however, that I should hesitate some time before assuming the responsibility of deciding upon such a course.

Another consideration has been pressed upon us by this case, and I have several times asked myself whether it is proper to allow a woman infected as this one was to nurse her own child. Though it escaped unscathed from her womb, I cannot see why she might not give her infant constitutional syphilis. You know, however, that, upon the other hand, it is asserted, by those who hold that the father transmits the disease in the majority of cases, that a woman who has borne a syphilitic child without herself being diseased may nurse it with impunity. This, however, seems to me to go to show that she is herself syphilitic, and not to bear at all upon the decision of the other question.

I have felt the same uncertainty about another patient, who contracted syphilis at the end of the eighth month of her pregnancy. In due season, her child, a healthy infant, was born, and was nursed by her. Except that she suffered somewhat from fissured nipples, everything went well until a month after her confinement, when a syphilitic eruption made its appearance upon her. The question to be decided now is whether the mother shall continue to nurse the child or not. If she does not, it is absolutely necessary to procure another nurse. I cannot convince myself that this can be done without danger to the latter, while I cannot but hope that the child has not yet contracted syphilis, and I fear that if allowed to continue to nurse from its mother's breast, she may transmit the disease to it. This case illustrates one of the most trying circumstances that may arise in connection with infantile syphilis. I do not know how to advise you; for I do not know what to do myself.*

Treatment.—So much time has been spent in discussing other questions connected with this subject, that we have not much left to devote to the consideration of the treatment. The first of these cases, the infant, shall be at once put upon mercury. This may be used in one of two ways; either by the skin or by the mouth. If the former be preferred, the ordinary mercurial ointment is the preparation to be used, in the way recommended by Sir Benjamin Brodie; that is, by rubbing a small portion into the skin of the belly, knee, or inner side of the thigh. Used in this way, the ointment is somewhat offensive; and upon reading a paper by Mr. Marshall (*Lancet*, May, 1872), upon the oleates of mercury as external applications in disease, it occurred to me that this might prove a very useful method of exhibiting the drug in this disease, especially in those cases in which it does not seem desirable to administer preparations of mercury by the stomach. According to Mr. Marshall, the oleate is cleanly and easily absorbed, which is not true of the officinal ointment, as this is a mere admixture of metallic mercury with lard.

* Shortly after the delivery of this lecture, this child began to suffer from a sore mouth, and a month later was covered with an undoubted syphilitic eruption. In the other infant (Case IX.) the eruption proved evanescent, and now, two months later, it remains well.

You will often find local applications of mercury to be very efficient, but in most cases you can give the medicine by the mouth, when you may employ any of the mild preparations. One of the best is the hydrarg. cum cret., a grain or a grain and a half of which may be given once or twice daily. In this case, the medicine will be given in this way, and we will begin with a grain twice daily. At the same time the child must be carefully watched, and his strength sustained by good food, fresh air, tonics, and, if necessary, by cod-liver oil.

Some authorities oppose the use of mercury in the treatment of this disease, and, indeed, there seems to be a growing and an influential body of physicians who take this ground. On the other hand is an equally strong and intelligent body, who look upon it as the most efficient agent in the management of syphilis. I am perfectly willing to confess that I am old fogey enough to administer mercury in these cases, that I am fully convinced of its utility, and that, having tried both methods of treatment, I esteem it more highly than any other single drug for the purpose,—nay, more than any other set of drugs. Mercury seems to be a tonic to these children, and while using it they increase in strength and gain in flesh. While I fully recognize the fact that the mortality among them is very great, circumstances are rarely so desperate that there is not a chance that their condition may be improved: so do not turn away from these little patients with the conclusion that there is no hope for them.

In regard to the other children, their treatment must be different. They have all passed beyond the first into the second stage of hereditary syphilis, and, with a single exception, have, at various periods, taken both the iodide of potassium and the bichloride of mercury. The exception is Case V., M. W., who has been treated with cod-liver oil and arsenic without obtaining the slightest benefit. Those who have used the specific remedies in the ordinary way have always been improved by them, and I have no doubt would be again; but, at the suggestion of my colleague, Dr. Maury, I am going to try hypodermic injections of corrosive sublimate in all of the cases. Some of you, I have no doubt, know that this method of treating constitutional syphilis was proposed a few years ago, but, so far as I am aware, it has been but rarely resorted to in this city. I have had no experience with it whatever, never even having seen a case so treated. I am, therefore, not capable of judging of its merits, but I am somewhat prejudiced against it. The most recent writer upon the subject is Dr. Lewin, whose work upon the treatment of constitutional syphilis is just being republished in this country, and the advance proofs of which I have had an opportunity to examine. Dr. Lewin employs three solutions of the following strength for injections,—three, four, and six grains of the corrosive sublimate to the ounce of water,—and states that if more concentrated than the strongest of these, they often cause intense local inflammation. He generally uses the second solution,—four grains to the ounce. Lewin seems to be well satisfied with the local effects of this injection, for he says, "Out of one thousand of my private patients, only one had a small abscess on the forearm." In these children we shall use the second solution, and shall administer one-twenty-fourth of a grain of the bichloride daily, and gradually increase the quantity to one-sixteenth, if the children bear it well. Lewin prefers the subscapular and sacral regions for administering the injection. We shall use the former region in all of these cases.

I stated, a moment since, that I had a prejudice against this method of giving corrosive sublimate in congenital syphilis. This is not because I am not a firm believer in the virtues of the hypodermic syringe. Few persons can be more firmly convinced of its great utility. But children like these will resist the use of the instrument,

and I fancy that not many days will have passed before they will learn to dread the visits of my resident to the wards. No iodide of potassium will be given for the present, and the only other remedies which will be administered are tonics. This child (Case II., E. H.) is, as you notice, very pale, and anæmic. She shall have the following:

R Ferri pyrophos., \mathfrak{zss} ;
Acid. phosphor. dil., \mathfrak{ziss} ;
Syrupi, \mathfrak{zss} ;
Aq. aurant. flor., \mathfrak{ziss} . M.

A teaspoonful in water after each meal.

The pyrophosphate of iron is given simply because it is a pleasant preparation.

Cases III. and IV. are not anæmic, but are thin and not very strong. They shall both have cod-liver oil, and, as they have never taken it, we will commence with a teaspoonful twice daily,—immediately after breakfast and supper.

The remaining girl (Case V., M. W.) will continue the cod liver oil, which she has been taking for some time.

ORIGINAL COMMUNICATIONS.

THE TREATMENT OF ANEURISM OF LARGE ARTERIAL TRUNKS BY COMPLETE COMPRESSION.

WITH A REPORT OF ITS SUCCESSFUL APPLICATION TO A CASE OF ANEURISM OF THE EXTERNAL ILIAC ARTERY.

BY R. J. LEVIS, M.D.,

Surgeon to the Pennsylvania Hospital.

THE treatment of aneurisms of great arterial trunks by producing with mechanical means, and maintaining, for a brief period, a complete arrest of circulation through the sac, is a method to which some forms of internal aneurisms are alone amenable, and which experience may demonstrate to be the most available treatment for aneurismal tumors in general.

The slow method of instrumental or digital compression during an indefinite period, in which but a partial arrest of circulation or but its very temporary or intermittent stasis is effected, is not applicable to aneurisms of the abdominal aorta, nor to those of the common iliac and its continuity as internal and external iliacs. In theory, such treatment is the gradual process of fibrinous lamination, induced in the sac during decreased aneurismal circulation under pressure applied to the vessel on the cardiac side of the tumor. For this gradual deposit of fibrin, a slow current of blood through the cyst is deemed essential, and therefore pressure, short of actual arrest of flow, is instituted and maintained until, in time, layer after layer is deposited and solidification of the tumor is the eventual result.

A few fortunate instances are recorded in which aneurisms of the femoral, the popliteal, and the brachial, treated on this plan, have been cured in a few hours; but other cases have occupied months of patient endurance, followed by success or failure, and the average duration of the treatment is said to be twenty-five days. In a report, in the *Medical Times and Gazette*, of twenty-six cases of aneurism successfully treated by gradual compression, the duration of treatment varied from the most brief, in sixty hours, to that of the most protracted, in eight months.

It is evident, and has been practically demonstrated, that in aneurism within the abdominal cavity prolonged and gradual compression cannot be endured by the patient for a sufficient length of time to effect laminar

deposition to the extent of consolidation of the sac; and it is not known that aortic aneurism could be in such manner cured, should even the extreme suffering and local visceral and general disturbances, incidental to the treatment, be tolerated. If, therefore, compression is at all applicable to aortic and iliac aneurisms, the treatment must be accomplished in a very brief period, and a number of successful cases have proven the value of total and brief compression in cases where the slow form of effecting pressure could not have been attempted.

The theory of the total compression is that, if absolute arrest of the current by powerful pressure above the aneurismal cyst is maintained, a soft coagulum of the contained blood will be formed, which will gradually condense and laminate, effecting a cure speedily, and with comparatively little suffering to the patient.

It is now an important surgical question, to be determined only by practical experience, which of the compression methods is the most available for general application to arterial trunks of the extremities; but for aneurismal tumors in locations where digital compression is impracticable, or where instrumental pressure cannot be borne through a long period, the plan of total or complete compression must prove an available and invaluable resource.

The method of treatment of aneurism which I would propose to term that of *complete compression*, to distinguish it from the *gradual and partial compression*, is but the reintroduction, with the all-essential addition of *anæsthesia*, of a very ancient practice, that fell into disuse owing to the extreme painfulness of the procedure. Complete compression by instrumental means was recommended by Heister, was first effectively practised by Guattani, and Hunter records his failure in an attempt, being obliged to desist in a case of femoral aneurism on account of the intolerable suffering induced by it. The present successful practice is then due to its being instituted whilst the patient is under the influence of an anæsthetic; and we are indebted for the recent demonstration of its efficiency to Dr. William Murray, of Newcastle-on-Tyne, England.

The first case treated by Dr. Murray by complete compression, with the aid of anæsthesia, was a no less formidable aneurism than that of the abdominal aorta, which was solidified after instrumental compression during five hours. The patient was a man aged twenty-six years, of spare frame, and accustomed to laborious work. The aneurism had been increasing for about eleven months, and the diagnosis was decidedly verified by a number of eminent medical men. It was found that compression of the aorta against the spine by pressure above the aneurism and near to the margins of the ribs on the left side, entirely arrested all pulsation. The mechanical appliance used was an ordinary horse-shoe tourniquet, made large enough to grasp the abdomen. During the continuance of the treatment any irregular movement of the patient, slightly displacing the instrument, showed activity of the throbbing, but on the discontinuance of the pressure, only slight pulsation could be detected, and, after a few hours of repose, all evidence of arterial action in the aneurism ceased. The patient rapidly convalesced, and resumed his laborious occupation.

The record of this unique case proves that the abdominal aorta may be compressed below the renal arteries long enough for the formation of a clot in aneurism, and that, too, without producing great physiological disturbance.

The death of this patient, after the lapse of six years, from aortic aneurism, developed above the original cyst, gave an opportunity of demonstrating at an autopsy the manner in which the latter had been consolidated and the aorta below occluded and atrophied, and also

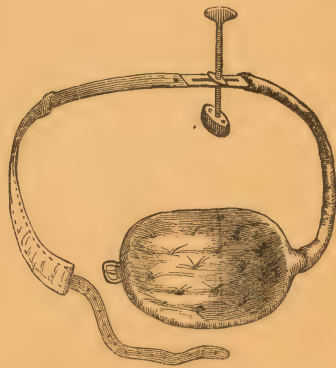
showed the manner in which a compensative circulation had been accomplished by dilating superficial vessels, and by deep anastomoses of truncal ones.

The case in which I successfully applied complete compression was that of a patient named John McCarne, aged forty-eight years, who was referred to the Pennsylvania Hospital by Dr. W. F. Atlee. He was in good general health, five feet eight inches in height, weighed one hundred and forty-four pounds, and had been, until recently, accustomed to laborious work. At the time of his admission he complained of severe pain in the right iliac region, extending down the thigh. He could walk only with the body flexed and supported by his hand resting on the knee. The right leg and foot were somewhat oedematous. His first sensations of the infirmity were dated as occurring on the evening after a long, rapid, and fatiguing walk of fifteen miles, about three months previous to his admission.

On examination a pulsating tumor was evident, involving the right external iliac artery up to near its origin, and an aneurismal dilatation, of fusiform outline, could be traced beneath Poupart's ligament, about two or three inches in the course of the femoral artery.

It was found that digital pressure, made with great force, on the upper part of the external iliac, compressing it violently against the brim of the pelvis, effectually arrested the pulsation in the tumor. Such pressure, however, when made even for a moment, was intolerably painful, and so much force was required as speedily to fatigue the hand of the operator.

To effect thorough mechanical pressure, an instrument, as shown in the cut, was made by Mr. Gemrig, and consisted of a hollow pad for counter-pressure on the buttock, a rigid steel band for partially surrounding the pelvis, with a small convex pad and a screw, adjustable in a slot in front of the encircling band.



It was found that, with proper adjustment of the compressing pad, the pressure of the screw would absolutely check pulsation in the aneurism.

On the 28th of September, 1871, in the presence of the clinical class of the hospital, the patient was thoroughly etherized, and the instrumental compression applied and continued under the immediate care of Dr. Longstreth, one of the resident surgeons. Pressure was made on the external iliac artery, about three and a half or four inches above Poupart's ligament, at or near the origin of the vessel, which was compressed against the underlying structures of the psoas muscle and the brim of the pelvis. Total arrest of circulation was effected, and continued during profound anæsthesia by ether, for five hours and a half. At the expiration of this time the patient showed some signs of exhaustion, and the compression was discontinued.

On examining the aneurism when released from pressure, it was evident that pulsation, of feeble but decided character, still continued in the sac, but I am well convinced that all continuity of circulation through

the aneurism had already ceased, and that the pulsations were merely due to impulse from the vessel above the point of pressure, producing a succussion of the newly-formed and still very soft clot. No pulsation could be detected far down the course of the femoral or in the arteries of the leg. Continued examination detected feeble pulsation, gradually diminishing, until the seventh day, when it was evident that the tumor was much shrunken and that all arterial impulse had ceased.

The patient on being relieved from the anæsthesia suffered great pain, requiring the administration of anodynes. On the succeeding days there were symptoms of phlebitis, with some œdema and livid discoloration of the limb. Warmth was maintained by encasing it in cotton and blankets. The inflammatory symptoms and acute suffering subsided in a few days, and the general condition of the patient became favorable. He continued to convalesce, and was discharged from the hospital as cured, on Nov. 4.

On examining the patient at the date of this communication, nearly one year from the time of treatment, I find a hard cord-like body indicating the line of the external iliac artery. He is in good health, and is employed as a laborer in an iron-foundry.

From consideration of this case, the following propositions may be offered: 1. That aneurism of the external iliac artery may be amenable to treatment by complete compression of the vessel in a brief period. 2. That total arrest of pulsation can be effectually made by mechanical means. 3. That compression of the external iliac at the cardiac extremity of the aneurism, probably even where aneurismal dilatation exists at the seat of pressure, and without the aid of aortic compression, may be sufficient for the cure. 4. That anæsthesia is essential to such treatment, and that prolonged etherization does not prevent coagulation of the blood. 5. That pulsation may not cease entirely for some days, even when a coagulum has been fully formed. 6. That reduction in size of the aneurismal tumor, by shrinking of the clot, is more rapid and complete when cured by total compression than when the cure is effected by slow deposit of fibrinous laminæ in the gradual or partial compression. 7. That the treatment of aneurism of the external iliac by the method of complete compression is the safest and most reliable, and should be generally adopted.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

CLINIC OF PROFESSOR AGNEW.

Reported by Dr. ELLIOTT RICHARDSON.

GANGLION.

AT Professor Agnew's clinic, held October 25, 1871, a girl, 13 years of age, presented herself for the treatment of a synovial tumor, commonly called ganglion, situated upon the dorsal surface of the wrist. Prof. A. proposed to effect a cure by the introduction of a thread through the walls of the sac, and performed the following operation. A bistoury was passed into the tumor near its base, and the contents of the sac pressed out through the opening. A needle threaded with a silk ligature was introduced by the side of the bistoury and brought out on the opposite side of the tumor. The needle and bistoury were then removed, the thread was loosely tied over the growth, and the hand and arm were bound upon a palmar splint.

It was directed that the thread be retained in this position for thirty-six hours, at the expiration of which time it was believed a sufficient degree of inflammation would have been excited to produce obliteration of the sac.

October 28.—The pain and swelling following the operation have much diminished, but a good deal of the latter still

exists. The patient is directed to paint the surface of the tumor daily with a mixture of tincture of iodine and glycerine, in the proportion of two parts of the former to one part of the latter. A compress is to be firmly kept upon it, and the palmar splint retained.

GONORRHOEA.

On October 28, a man, 22 years of age, was presented to the class, suffering from a gonorrhœa contracted three or four weeks previously.

He had at this time, in addition to the urethral discharge, œdema of the prepuce and a little lymphatic swelling and tenderness in the groins.

The patient had been under treatment for the past few days at the dispensary connected with this college, and was only shown to-day in connection with the following case of

CHANCRE.

This patient was a boy 19 years of age, who, at nearly the same time, contracted from the same woman a phagedenic chancre on the upper portion of the glans penis. This had extended to the adjacent surface of the prepuce, the whole upper portion of which it had destroyed.

The period of incubation in this case was about a week. This patient had also been under treatment in this institution, and was at the time improving under the internal use of potassio-tartrate of iron, and the local application of a solution of permanganate of potash.

FISTULA IN ANO.

The next case was that of a man aged 24 years, affected with fistula in ano. This began six weeks ago, as an abscess by the side of the rectum. The general health of the patient was good, and the local trouble could not be traced to any apparent cause.

The patient being placed upon his side on the operating-table, an examination of the affected part was made by introducing a finger into the rectum and passing a probe through the fistula. This was found to be complete, the point of the probe coming in contact with the finger in the rectum, through a small opening situated between the internal and external sphincters. Prof. Agnew then proceeded to operate by introducing a grooved director through the fistula, bringing the internal extremity out at the anus, and then dividing all the tissues supported upon it. Examination was then made for sinuses. Two of these were found extending beneath the skin for an inch or two, and were laid open throughout their entire lengths.

The wounds thus made were lightly cauterized, by rapidly passing over the divided surfaces and the fistulous tracts a stick of potassa cum creta, and then packed with lint saturated with olive oil. Directions were given to keep the patient in bed, and to prevent a motion of the bowels for three or four days, by the use of opium.

FALSE ANCHYLOSIS OF WRIST, ETC.

This was a case of false ankylosis of the wrist and finger-joints, following a Collis' fracture of the radius, received about eight weeks ago. Perfect union had now taken place, with, however, some deformity.

Difficulty of motion in the neighboring joints, the lecturer said, was a very common sequel of this fracture, and, even under the most careful treatment, was found to exist in a majority of cases. He thought it due not so much to injury to the joint itself, as to adhesions of the tendons over the seat of fracture, by which their play was restricted. To prevent this result as far as possible, motion of the joints involved should be resorted to after the second week of fracture. The patient being etherized, the bands of adhesion were broken up by forcible motion of the wrist and finger-joints. The hand was then placed upon a palmar splint, upon which it would be retained for one or two days undisturbed. At the expiration of that time, judicious motion would be resorted to, and continued two or three times a day until recovery.

The lecturer said that before attempting to operate in this manner the surgeon should ascertain that the patient's health is sufficient to bear the treatment, and should be well satisfied that all symptoms of active inflammation have subsided, leaving only stiffness and rigidity.

LITHOTOMY.

At the clinic held November 1, 1871, Prof. Agnew operated upon a man 36 years of age, for the removal of vesical calculus. This man had enjoyed good health until about two years ago, when the symptoms of stone in the bladder first became noticeable. His health had suffered somewhat from the continued irritation of the calculus, but had not been seriously impaired. For several days previous to the operation he had been taking an alkaline diuretic mixture, composed of decoct. uvæ ursi and liq. potassæ, and, in order to procure rest, had occasionally used suppositories of opium and hyoscyamus. The patient having been placed upon the table, and a few ounces of tepid mucilage thrown into the bladder, a sound was introduced and the stone distinctly felt. He was then etherized, and the stone removed by the lateral operation, cutting through the perineum to the left of the median line. At the conclusion of the operation there was some hemorrhage from the plexus of veins at the neck of the bladder, which threatened for a time to prove troublesome, but was soon checked by injections of cold water. The patient was then removed to the ward and placed upon a bed.

November 8.—About an hour after the operation, blood was discovered issuing from the wound and the urethra, and on examination the bladder was found to be filled with blood, which had not shown itself externally until forced out by the contractions of this organ. After other efforts to check the hemorrhage, which was now quite free, it was found necessary to plug the wound with lint, a catheter having been previously introduced, around which was tied an apron or diaphragm of linen about three inches from its point. This acted as a base for the packing, and prevented its slipping into the bladder.

Twenty-four hours later the packing and catheter were removed, and their removal was followed by a free discharge of urine. Since then there has been no return of hemorrhage, and the urine has flowed freely through the wound. The patient was very much weakened by the loss of blood; but under the liberal use of milk and beef-tea, administered at short intervals, with a small quantity of whisky, his strength rapidly returned.

November 18.—The patient has continued to do well. He is passing urine freely, some of which now flows through the urethra. He has had a little morphia at times to relieve pain and promote sleep, and occasionally sweet spirit of nitre to reduce fever: these, with a moderate amount of whisky, have composed his medication.

November 21.—Left the wards to-day, his condition indicating complete and speedy recovery.

OLD LUXATION OF HUMERUS.

At the clinic held November 4, a woman, aged 43 years, applied on account of an injury received nearly four weeks ago. At that time she fell down a flight of stairs, striking her arm near the shoulder. She had now pain in the whole arm, which was swollen, very sensitive, and almost immovable.

The usual symptoms of dislocation of the humerus, prominence of the acromion, flattening of the deltoid, eversion of the elbow, etc., were present in the case, and a diagnosis of dislocation was made. The woman having been etherized, Prof. Agnew proceeded to break up adhesions by making rotary movements of the humerus. After accomplishing this, he drew the arm up by the side of the patient's head, and, placing a foot upon the acromion process, made traction, and soon succeeded in reducing the luxation. The arm was retained in a Velpeau bandage. It was directed that this bandage be left undisturbed for six or eight days, when it would be removed, a little motion of the arm made, and then re-applied. This to be repeated daily for another week, when it would be entirely removed.

CLINIC FOR DISEASES OF THE SKIN.
SERVICE OF DR. LOUIS A. DUHRING.

Reported by Dr. ARTHUR VAN HARLINGEN.

URTICARIA.

THIS affection, which is vulgarly known as nettle-rash, may occur in several forms, the most usual of which is characterized by the formation of bean-shaped wheals on va-

rious portions of the cutaneous surface, or at times over the whole body, usually making their appearance suddenly. Occasionally blotches appear over the lips, and the intense itching and burning accompanying the eruption is a characteristic symptom.

Another form, that called urticaria papulosa, the case before us exemplifies. It is marked by the occurrence of rounded papules. In a much rarer variety, urticaria bullosa, the wheals which at first make their appearance go rapidly on to the formation of blebs, of which the contents drying up leave slight crusts. This form of urticaria closely resembles pemphigus, but in the latter affection the bullæ are not preceded by wheals, nor is the eruption completed so suddenly. Urticaria depends for its cause, in the majority of instances, upon some disorder of the digestive organs, and in particular of the stomach. Very commonly a hearty meal of shell-fish or strawberries, where there is an idiosyncrasy on the part of the individual, will be the cause of an attack.

In the present case, the patient, who is a washerwoman, states that the eruption appeared while she was working over the steaming soap-suds of her tub. But, if her health were good, a simple exposure of this kind would not cause any such trouble, and we find, on questioning her, that she shows many of the symptoms of dyspepsia. She says that her appetite is poor; she suffers from headache; after eating she feels a sense of weight at the pit of the stomach, and has sour eructations. Her bowels are constipated, and during the attacks of headache she frequently vomits. She suffers constantly from thirst, but water, except in the smallest quantities, disagrees with her.

Of course, our first object here is to get rid of this dyspeptic trouble, and to that end I shall order an aperient tonic, the mist. ferri acida of the University Pharmacopœia, a preparation which we find very useful in cases like the present. The only external application I shall direct will be a lotion of alcohol and water, to be frequently sopped on the wheals with a soft rag.

ALOPECIA AREATA.

The case before us is quite a typical one. On looking at this boy's head, you see two round patches of baldness, the larger about the size of a silver dollar, the other somewhat smaller. These patches resemble, in many respects, those caused by the parasite in tinea tonsurans, but the affection you observe here is quite a different one, and in fact—as I shall show you presently—is not parasitic at all.

In the case of tinea tonsurans, or ring-worm of the scalp, after the disease has lasted some weeks, the part of the head attacked looks—as the name of the disorder indicates—as if the barber had shaved it. The hairs have the appearance of having been clipped off just a line or so above the scalp; in reality, they are broken off short. In the case before you, you perceive that the appearance is quite different; there are no hairs broken off short in this patch, but it is perfectly denuded,—as smooth, in fact, as a billiard-ball. The history of alopecia areata is very much as follows:

It most often occurs about the age of puberty. A patient comes to you and says, "Doctor, I am losing all my hair: it has been falling out by handfuls in the last few days." On examining his scalp, you will find that over a limited area you can pluck out almost any quantity of hair by the roots with the greatest ease. Such a patch we had here in the case of this boy a few weeks ago. It is now, as you have seen, perfectly bald, and will remain so for a month or longer, and then the hair will gradually begin to grow on it again.

Alopecia areata was for a long time considered to be of parasitic origin; but later researches have gone to prove that this theory is incorrect, and its non-parasitic nature is now very generally conceded. If you examine the hairs which have been plucked from this patient's head, you will not find any evidence of the presence of a parasite, but you will find atrophy of the bulb.

Alopecia areata is a tolerably rare disease, but many cases probably are not noticed, because it gets to its worst point very quickly, remains stationary some time, and then passes away spontaneously. It may invade the hair on any portion of the body; and a case came under my notice some time ago in which the hair not only of the head, but also of the axillæ, eyebrows and lashes, pubes, etc., came out. In this case, a

year later, the hair had all commenced growing again in these various regions.

The treatment found to be most beneficial in this disease is a stimulating application of one kind or another. But the great point is to make the diagnosis between this affection and tinea tonsurans. Under the microscope, the hairs in the latter case are found to contain spores of the characteristic trichophyton, and to be thick and swollen, while the hairs in alopecia areata are thin, atrophied, and contain no parasite.

PRURITUS CUTANEA.

The old man who is before you shows no sign of disease upon his skin, except such as is the result of scratching. He complains, however, of constant and intolerable itching. The affection which we have here is pruritus cutanea, the seat of which is in the nerve-filaments, and of which the characteristic is, as you see in this case, intense itching, without the existence of any elementary lesion of the skin. Do not confound this with any of the other diseases of the skin, many of which are also accompanied by itching. Many cases of eruption, the result of pediculi, or of inflammation of the hair-follicles, are mistaken for pruritus cutanea. A careful examination will always bring pediculi to light where they exist; and inflamed hair-follicles may be recognized as minute red points scattered over the skin.

Pruritus may attack a part of the body or the whole of it. Patients frequently compare this itching to the feeling of thousands of ants crawling over them. When the disease attacks the genitalia or the integument around the anus, it is particularly distressing. It may occur at any age, but is more common in the later periods of life. The causes are various. It may be due to some irritation of the alimentary canal, as, for instance, worms. In women, disease of the uterus is not an infrequent cause. Frequently this affection is exceedingly stubborn, and palliative measures seem alone to be of benefit. This may be partly due to the difficulty which is often found in detecting its origin, whatever that may be. But the cause in each individual case should always be actively sought for.

As regards treatment, in simple cases sometimes local applications are sufficient. Alkaline baths form, perhaps, the best treatment with which to begin: four ounces of carbonate of soda may be dissolved in a bath of thirty gallons of water, and the patient directed to remain in it for about half an hour, drying himself afterwards by gently patting the skin with the towel, instead of rubbing. The most convenient time for taking these baths is just before retiring at night: they should be tepid, and their use should be persisted in for some time. They may be given twice daily, if necessary.

But, above all, the cause should be carefully looked into. Tell your patient that his case is a troublesome one, and that it will probably require time to find out its origin and relieve him of his trouble.

PREMATURE QUADRUPLE BIRTH.—Dr. W. Cuppaige, of Castlereagh, related to the Dublin Obstetrical Society the following case (*Med. Press and Circular*, Feb. 21, 1872):

A patient was attended by a midwife; she was 19 years of age; it was her first pregnancy, and she was just about entering the sixth month of utero-gestation. I was called at 5 P.M., and just as I got into the room a small female fetus of about the fifth month was expelled, head foremost. The woman's size not having diminished, I examined and found another bag of membranes pressing through the os. Supposing that this second fetus would be expelled as easily as the first, I went away. There was no return of pains, and the patient slept through the night. In the morning I gave a dose of ergot, which was soon followed by the expulsion of a second fetus, male, with the feet foremost. On examining the patient now, I found the membranes of another fetus; these I at once ruptured, whereupon a third child, female, was expelled, the breech presenting. After its birth, I again instituted a careful vaginal examination, and was greatly surprised at discovering another bag of membranes, which I at once ruptured, when the fourth fetus—a male, head presenting—was delivered. The first two children, I may here remark, were born alive and cried, but did not long survive. The third and fourth children showed no signs of life at birth.

Dr. M'Clintock said he had looked over the registry of the Lying-in Hospital, and found that there was only one year since 1757 in which a quadruple birth had occurred. It took place on the 30th of October, 1788, in Dr. Clarke's Mastership. The name of the woman was Mrs. Hood; she was 30 years of age, and it was recorded in the register that she was an Irishwoman. (Laughter.) The children, in this case, were born alive and baptized, but subsequently died, though the day of their death was not mentioned. The woman herself left the hospital at the end of fourteen days. Dr. M'Clintock proceeded to say that there was a preparation in the museum of the Lying-in Hospital of five children simultaneously conceived. The entry, which appeared in the museum catalogue for that year (1839), was as follows: "Five children simultaneously conceived; three separate ova; one single, with its placenta; the others twins, each furnished with a common placenta; three months pregnant; miscarried in the summer, 1839." This woman was several times subsequently in the hospital, on one of which occasions he (Dr. M'Clintock) saw her. She was a stout, sanguine woman, with fiery red hair, and the wife of a tailor. She alluded, with no small pride, to her having once been pregnant of five children.

In the same number of the same journal we find the following:

Dr. E. S. Ray, in the *Atlanta Medical and Surgical Journal*, reports an interesting case of enormous distention of the uterus. Before confinement a diagnosis could not be made out of the exact condition of things, though the foetal heart was heard, and there was a dulness over the symphysis pubis. At all other places the fluctuation was very distinct. The suffering of the woman from the distention was so great that it was deemed proper to draw off the fluid by a trochar. But ere this could be done, the woman was delivered of three children and five gallons of water. Two of the children were born dead, and the third died in half an hour. Particular notice is drawn to the fact that, in this case, it was impossible to separate amniotic from peritoneal dropsy. Though most of the gentlemen called in consultation agreed that she was pregnant, they were more certain that she had peritoneal dropsy, which tapping alone could relieve.

MODIFICATION OF PETTENKOFER'S TEST FOR BILIARY ACIDS.—Strassburg (*Zeitschr. f. Anal. Chem.*, 1872) adds to the urine to be tested a little cane sugar, then moistens a piece of filtering-paper with the liquid, and, after drying, places a drop of concentrated sulphuric acid upon the impregnated paper, which after a quarter of a minute shows the violet coloration beautifully, particularly in transmitted light. Normal urine does not produce this coloration, which appears if only 0.00003 of biliary acids are present.

TO PREVENT ITCHING IN SMALLPOX.—Dr. Gueneau de Mussy (*Journ. de Pharm. et de Chim.*, June, 1872) uses, when the itching is intolerable, a cerate composed of simple cerate 30.0, bromide of potassium 3.0, and camphor 0.3 gm. After the pustules have been followed by ulceration of the skin, the following application to the little ulcers is employed by the same physician: Simple cerate 30.0, tannin 2.0, oxide of zinc 2.0, calomel 0.25, extract of opium 0.1 gm. During the intervals of the applications, it is useful to wash the affected parts with water to which a little tincture of benzoin has been added.

A NEW ORGANIC MATTER IN DIABETIC URINE has been discovered by Professor Campani (*Journ. de Pharm. d'Anvers*, May, 1872; from *Gaz. Méd. de Paris*). It is precipitated by basic acetate of lead, and reduces four times more of Fehling's solution than is reduced by glucose; but it is devoid of rotating power upon polarized light.

Although the precise origin and true nature of this new body are not known, this discovery throws a doubt upon the correctness of the assays by volumetry in some cases of glycosuria; it deprives, in particular, a case of polyuria of all value, in which small traces of sugar were found, upon which ground an analogy has been supposed to exist between this disease and diabetes; and it follows, finally, that diabetes is not a simple glycosuria, but that its morbid process consists in an altogether special alteration of the functions of assimilation and nutrition.

PHILADELPHIA MEDICAL TIMES.

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ANNOUNCEMENT.

THE present issue completes the second volume of "*The Philadelphia Medical Times*," and the publishers congratulate themselves on the high professional and scientific character which has been universally conceded to it.

In entering upon the third year of its publication, they propose to make a change which they think will meet the approval of their subscribers, viz.,—to issue it weekly, instead of twice a month, as heretofore. By so doing, they will be enabled to give their readers a constantly fresh résumé of the current news of the profession.

To meet the increased expense involved in this change, they will be obliged to make the price of subscription \$5.00 per annum.

The publication-day will be Saturday of each week.

All communications should be addressed "Editor of Philadelphia Medical Times," care of the publishers.

EDITORIAL.

THE AMERICAN MEDICAL ASSOCIATION.

IN our last issue we called attention to a plan proposed in the *Boston Medical and Surgical Journal* for the reorganization of this body on a more purely representative basis. We most earnestly hope that the profession will see the great importance of this matter.

What is wanted is that the Association should be changed from its present character—that of a very promiscuous gathering of such physicians as have the time to amuse themselves with it—to that of a congress of chosen delegates, coming from intelligent and scientific constituencies, for the transaction of business. No one can have watched the course of the Association without noting the vague and desultory style of its discussions, the small value of its scientific work, and the futility of its attempts to "take a stand" on any question of real consequence. It is not in fact the exponent of the professional mind of the country. But, it may be asked, what is to be done about it? Admitting the truth of all this, how is any change to be effected? Our answer will, we think, be in itself a proof of the urgent need of reorganization.

Since there is no council, standing committee, or other authoritative body, always representing the Association, before whom matters affecting it or the welfare of the profession at large can be brought, this subject must be left in the hands of those who will make it their business. We call upon Dr. S. D. Gross, of Philadelphia; Dr. L. A. Sayre, of New York; Dr. N. S. Davis, of Chicago; Dr. W. K. Baldwin, of Montgomery, Alabama; Dr. Yandell, of Louisville, the president of the Association in 1872; Dr. Logan, the president elect of the Association for 1873; and all others who have the welfare of the Association at heart, and who wish to see it the power it ought to be, to consider whether the plan proposed by the *Boston Medical and Surgical Journal*, with or without modification, or any other plan, can be adopted with advantage. We ask these gentlemen, if possible, by some concerted action, to bring before the meeting at St. Louis, in May next, such amendments to the organic law of the Association as may make that body truly representative of the great army of workers in the cause of scientific medicine in the United States.

UNRELIABLE TESTIMONY.

WE do not know how skilful an actor the reporter may have been, who lately feigned insanity in order to get an insight into the affairs of the Bloomingdale Asylum, or how familiar he may have been with the form of the disease which he chose to assume: we cannot therefore tell how readily the physicians concerned were deceived. But by his success nothing at all is proved as to the general run of alleged cases of improper admissions to hospitals for the insane, since here the whole thing was a combination of the reporter and his friends, by lies both acted and spoken, to deceive those who had no reason to think they were dealt with otherwise than in good faith. It would be quite as just for a man to feign sickness, send for a doctor, cheat him by artificial symptoms and by stories told by friends, and then find fault because the sham was not at once seen through.

Nor do we pretend to declare either that the reporter saw no abuses while he kept up his imposture, or that no abuses exist in the institution whose officers he cheated. But it seems to us clear that evidence so obtained, by fraud and falsehood, should be received with great caution. This was no impartial investigation, but the animus of the trick was hostile and aggressive, the observer bent on seeing everything in an unfavorable light. However commendable energy and enterprise in the obtaining of news may be on the part of those who conduct the newspaper press, we cannot but think that this latest phase of "reportorial" prying will be in the highest degree repulsive and detestable to every honorable mind. We trust that the commission appointed by Gov. Hoffman will do their work in so thorough a manner that the statements of the malingering reporter may be set aside as both unnecessary and contemptible.

AMALGAMATION.

FROM a report of the proceedings of the Council of the College of Physicians and Surgeons of Ontario, in the *Canada Lancet* for August, we learn that there were present in that body seventeen gentlemen merely called "Drs.," four who are designated as "Homœopathic members," and five as "Eclectic members." Although, on looking through the report, we find that the matters discussed were not those pertaining to science, but simply medical education, registration, and the like, we cannot but regret the holding of such an assembly.

The law in Canada may be such as to make this fraternization with quackery a mere measure of self-preservation; but, unless it be so,—unless the regular physicians are acting under protest, and with a firm and declared resolve to break off the connection with homœopaths, eclectics, and all other quacks at the earliest possible moment,—the formation of such a union was a grave and inexcusable mistake. We think, indeed, that where such laws exist it would be better to test them before the courts, and show up their absurdities in the most public manner, since a principle would be thus vindicated, in the very existence of which the community are slow to believe.

INTERNATIONAL OPHTHALMOLOGICAL CONGRESS.

THIS body met on the 1st ult., in the Library of the College of Physicians, in Trafalgar Square, London; one hundred and twenty names having been registered. Eleven members of the American Ophthalmological Society were present: Drs. E. Dyer, W. F. Norris, and W. Thomson, of Philadelphia; C. R. Agnew, H. D. Noyes, and D. B. St. John Roosa, of New York; H. W. Williams, and B. Joy Jeffries, of Boston; John Green, of St. Louis; Charles E. Rider, of Rochester, N.Y.; and A. D. Williams, of Cincinnati.

Prof. Donders presided. The session lasted three days, and a number of interesting communications, some of which called forth much discussion, were made. We hope to have room for a list of these in our next issue.

The second meeting of the Congress will take place in America, in 1876.

THE TICHBORNE CASE.

NO one can have taken any interest in the proceedings in the Tichborne trial, or in the subsequent course of the claimant, without being struck with the difficulty of getting at the truth in questions of doubtful identity. The case of Armand Dutilh, executed for the personation of Peter Guerre, in France, was familiar to us in our boyhood, and many other illustrations of the same kind have occurred. But not the least curious feature of the Tichborne case is, that in spite of the decision of the court, and of the fact that a charge of perjury is pending against the now defeated

claimant, he still has so large a following that he is able, with the aid of two members of Parliament, to hold public meetings in various parts of England, and to engage a strong popular sentiment in his behalf. We cannot but look with curiosity for the final issue of this extraordinary transaction.

SPIRITUALISM.

A REVIEW on this subject, in the *Journal of Psychological Medicine* for July, has forcibly impressed us with the inadequacy of the results arrived at by all the "mediums" and their "manifestations." Admitting, for example, the entire story of Mr. Home's "levitations" and "elongations," what does it all amount to? Is any light thrown upon the great problems which engage man's soul when he looks beyond this life? Or, to take a lower view, has any practical advantage ever been gained in the transaction of temporal affairs? The whole thing seems to be stamped with a childish unreality and aimlessness, which deprives it of all weight or value in the eyes of practical men.

AN ANSWER TO DR. H. C. WOOD, JR.'S CRITICISM ON DR. PEUGNET'S VIEWS IN REGARD TO VERATROIDIA AND VIROIDIA.

BY EUGENE PEUGNET, M.D.

THERE appears in the August 15, 1872, number of this journal, a criticism by Dr. H. C. Wood, Jr., on a chemico-physiological paper on veratrum album, veratrum viride, and the alkaloids, read by me before the New York County Medical Society, and subsequently published in the *Record*.

Whilst preparing the above-mentioned paper, I necessarily found that some of my views were essentially divergent from those of other observers and experimenters. Therefore, when I digressed from others, I did it without hesitancy, "selecting the grain and casting the chaff to the winds." I necessarily expected to have my paper criticised and reviewed; but I must admit that I did not expect this attempted philippic of Dr. Wood's, this "almost unique" criticism. After a careful perusal of it, I can arrive at but one conclusion; that is, that the doctor must have read my paper in an exceedingly careless and superficial manner.

For instance, he opens as follows:

"It is, however, only of the original experimental portion of the essay that I desire here to speak.

"This part of the memoir the author commences as follows:"

and he makes me begin at p. 127, second column, fifth line from the bottom, *Medical Record*, whilst I actually commenced at p. 121, first column, fourteenth line from the bottom. The very paragraph he quotes is *primâ-facie* evidence of his superficial reading; for in it I allude to my chemical experiments.

It is, therefore, evident that my critic should not have exclaimed with such self-assurance, "If he rests

his decision upon chemical investigations, he should say so more plainly, and by all means give the tests." He will find that on p. 122, first and second columns, the distinct tests are given, with the single exception of differential analysis.

He then endeavors to cast a doubt on my physiological deductions. If he again refers to the *Record*, p. 129, first column, beginning at last line, the doctor will find that I do not base my opinion on my experiments alone.

The doctor, in the same happy vein, emphasizes as follows:

"A most curious blunder occurs in this connection, where I am made to prove that the 'peculiar action on the alimentary canal is through the pneumogastric nerve; for there was no vomiting and purging, except in the animals in which he had not divided the pneumogastriks.' Every reader of the *American Journal of the Medical Sciences* knows that I published in it some months since an elaborate series of experiments which absolutely disprove such deductions."

If "every reader" and the doctor will now turn to the January, 1870, number of the above-mentioned journal and examine Exp. 11, 12, 18, 19,—experiments in which the pneumogastriks were *not divided*, there was *vomiting and purging*; whilst in Exp. 23, in which the pneumogastriks were divided, there was *no vomiting or purging*.

His experiments with veratria (sabadilla), a more active congener of the veratroidia, give similar results: vide Exp. 14, 24, and 25.

Therefore, if the critic's assertion is correct, I trust that he will have the candor to admit that there "must have been a curious blunder," either in the report of his experiments or in the experiments themselves; which I did him the justice to consider reliable.

In reference to viridia, he says,—

"In regard to the latter, there is no doubt but that Dr. Peugnet and myself both witnessed the same phenomenon, one interpreting it as the result of sedation, the other of stimulation."

As Dr. Wood *does not know* whether he made use of pure tested viridia or not, whilst I am positive that I did, his deductions are certainly less deserving of consideration. Again, Dr. Wood says,—

"Nor can I understand on what grounds Dr. Peugnet insists that the convulsions of viridia-poisoning are from overstimulation, whilst those caused by veratroidia are from sedation; they both being accompanied with marked paralysis, and also very similar in their concomitants."

The doctor is very obscure here. If he bases his assertion on his own experiments, he is undoubtedly right; but most assuredly he cannot assert that there was the slightest degree of paralysis in my experiments XIV. to XXIII. inclusive, made with pure tested viridia, and in that case he would manifestly be in error.

The doctor's mistake has been to consider my chemico-physiological investigations, like his, simply a physiological investigation.

Further, I asserted, and do affirm, that the poisonous

action of pure tested viridia is similar to that of strychnine; and surely strychnine convulsions are not from *sedation*.

He also objects to my conclusions in reference to the circulation, as I did not make use of the cardiometer. I did not deem it necessary; for, as he admits that "there was no slowing of the pulse" in my experiments with the viridia, its use was not necessarily indicated.

In reference to my assertion that he made use of viridia contaminated with veratroidia, the critic states, "It appears, however, easy to disprove this by his own statements and admissions," and quotes *only a portion* of a paragraph from p. 130, second column, thus effectually—unintentionally, I trust—destroying the meaning, the expression of the entire paragraph; and for his benefit I quote the whole; his quotation is in italics:

"This last experiment is of special interest, for it demonstrates the importance of fully separating the alkaloids; it also serves to explain the cause of the fallacy of Prof. Wood's conclusions from his experiments with Bullock's viridia.

"This investigation would be incomplete, for the experiments on myself fail to demonstrate that the powerful sedative action of veratrum resides in the veratroidia, were it not that the explanation of it is facile and conclusive.

"*Scattergood, Percy, and Oulmont found that the exhausted resin of veratrum viride possessed a greater sedative action than the veratroidia. Percy called it resinoid; because he thought that it was a complex body, containing a distinct alkaloid. Wood, also, found that the viridia of Bullock possessed a similar power.* Bullock has demonstrated that another alkaloid, the viridia, can be extracted from this resinoid by means of acetic acid, for that acid separates the alkaloids from the combined state in which they naturally exist, which neither muriatic nor sulphuric acids have the power of doing, and that is the cause of Scattergood's, Percy's, and Oulmont's failure. I do not believe that the viridia furnished to Professor Wood by Mr. Bullock was entirely free from veratroidia. Either the evaporating or sulphuric acid tests should be tried whilst separating them, and if they fail to give any response it is proof positive that the veratroidia has all been extracted; but what is conclusive to my mind is that he found that the two alkaloids were identical in their reactions, whilst I have shown them to be distinct.

"Therefore I conclude that the experiments of Percy, Scattergood, and Oulmont with the so-called resinoid, and Wood's with Bullock's viridia, demonstrate the physiological effects of the combined alkaloids. Consequently I believe that the following conclusions of Prof. Wood do not apply to the physiological effects of viridia, but to those of the combined alkaloids, for I have shown that the viridia is inert as a sedative, and will prove the accuracy of my assertion by experiments."

"Every reader" will, probably, at once observe by reading the entire paragraph that I meant that Scattergood's, Percy's, and Oulmont's so-called exhausted resin still contained, as well as Bullock's viridia, a trace, a portion of veratroidia in intimate combination with the viridia; for in the first place there is no mineral acid which has the power of fully separating them from the intimate combination in which they exist; whilst in the second, it will at once be self-evident to "every

reader" of Mr. Bullock's (*Amer. Jour. Pharm.*, Sept. 1865, March, 1866) chemical investigations, and of Dr. Wood's physiological investigations, that the first did not by any test endeavor to ascertain whether he had fully separated the alkaloids or not; the latter had evidently a doubt as to the purity of the two alkaloids, vide 1st page, commencing at fourth line from the bottom, of his memoir.

It will thus be seen that it does not sustain, or even warrant, the critic's assertion that

"Here is a series of authorities all agreeing that even viridia contaminated with inert *resin* is much more of a circulatory sedative than veratroidia; from whence it follows that Dr. Peugnet's conclusion is incorrect, unless we agree that the less is more than the greater."

As to the doubt the critic endeavors to cast over my conclusions in reference to the resinoid of veratrum album, reference to my paper will demonstrate the thoroughness of my experiments in regard to the resin, and Dr. Wood should have based his doubts on chemico-physiological deductions, not on *ad captandum* statements.

CORRESPONDENCE.

THE PREVENTION OF EXCESSIVE INFANTILE MORTALITY.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SOME evils, long familiar, attract general attention only when a startling occurrence forces them before the public mind. Physicians have always been aware that the summer is, in New York and Philadelphia, fatal to infants beyond any other season. They have also known that it is not heat alone, but the *atmosphere of large cities*, under its influence, that proves so destructive in early life. In the community at large, however, these facts have been almost overlooked until, this summer, a single week produced a death-list of 1569 in New York, and the next, of 852 in Philadelphia; in each instance more than double the weekly mortality of the year; the excess being almost altogether due to "diarrhoeal diseases" and other affections of young children. Epidemic cholera in 1866 caused 900 deaths in Philadelphia. This number of victims was exceeded in a single month this year by the deaths in our city, from cholera infantum and diarrhoea, in children under five years of age.

Now, a large part of this mortality must be preventable. How may it be prevented? This is a practical question. A natural suggestion growing out of the facts was that first brought out and carried into operation by the *New York Times*: of frequent rural or aquatic excursions for the children of the poorer classes. Already, by the exertions and means of a number of charitable persons, several thousands of infants and mothers have been, in the two cities, taken out upon the water or to the refreshing air of the parks. Of 350 infants in arms upon one of these occasions, a physician remarked that "*two-thirds were ill.*" The benefit to many of these was immediate and marked.

This, however, is but a fraction, a beginning, of what is needed. One or two excursions in a season, if they could even include all the babes of the tenement-houses of New

York or of a similar class in Philadelphia, will not greatly check the mortality of those who return to live as they have been living. One thing wanting is to arouse public attention to the miserably unsanitary condition of some parts of our large cities. The work of their reform has begun well in New York, under the well-sustained authority of the Board of Health; but there, as well as here, much more remains to be done. Certain sorts of dwellings (if they can be called such) ought never to be tolerated in any community.

But more yet can be effected, we believe, in mitigation of the excessive infantile mortality of our cities. If it were practicable to *transport to the country*, at the beginning of hot weather, large numbers of infants, with their mothers (the same class as the excursionists), it is certain that the amount of illness and death would be greatly diminished. Why cannot this be done?

It would require, first, the use of ground; which the highest parts of the public parks would furnish, although still more remote and elevated sites might be chosen and obtained. Secondly (as only *summer accommodations* would be wanted), large *tents*,—*army hospital tents*, for example, whose salubrity, as compared with hospital buildings, was so amply proved during the late war. Thirdly, the services of a small number of matrons, stewards, physicians, and nurses, or other attendants. Very few of the last-named would be required; as the mothers necessarily present with their offspring would be able to render nearly or quite all the necessary service. Lastly, of course there must be furnished wholesome food, at least for the adults of the "summer camp." Judicious selection of the recipients of such a charity would be very important. But this would be much more easy than has proved to be the case with the free excursions. Moreover, besides the advantage to the infants rusticated at a critical time (which ought to be fixed as not older than three years, for limitation of the number), there would be a gain of room and air in the crowded parts of the town for those who are left; and also *practical lessons in wholesome living* for a class that needs them much. We doubt whether the expense of several such camps, well administered, would greatly exceed that of the children's free excursions; while the permanent benefit afforded must be many times greater. We commend the subject to our philanthropists.

Yours, etc.,

HENRY HARTSHORNE.

REVIEWS AND BOOK NOTICES.

DISEASES AND DISPLACEMENTS OF THE UTERUS. BY EDW. NESBIT CHAPMAN, M.A., M.D., late Professor of Obstetrics and Diseases of Women and Children, Long Island College Hospital. New York, Wm. Wood & Co., 1872.

In this age of restless eager search after what is new and startling, it is perhaps well to listen to the warning voice of one who calls upon us to stop for a moment and quietly consider whether, on the whole, "our knowledge of better and more successful methods of curing disease will ever be proportionately increased;" when "the writings and practice of certain modern physicians of the largest and broadest scientific acquirements show that they have refined their treatment to such a degree that it is purely expectant and amounts simply to doing nothing."

In order, however, "to prevent the present from sinking into that oblivion which is enshrouding the past," Dr. Chapman has devoted himself to the task, "a humble one, of sim-

ply delineating from personal observation the *histories*, symptoms, pathology, and treatment of the non-gravid uterus." It is evident, therefore, that the first duty of the "Histerologist" (for the doctor repudiates the title of Gynecologist, on the ground that it is "too broad") is to trace briefly the successive steps by which the science has attained its present growth. This he has done, but in a manner so exceedingly brief that we confess to a moment's astonishment when we found no names to fill the gap between "the older authors" and those of Drs. Tilt, Bennet, and Meigs; but a closer examination showed that the keen satire of the author had escaped us, for he includes under the same head "the older standard works, and those of a later day, by aged professors who are oblivious to the fact that the doctrines taught by them for some thirty or forty years are obsolete, and proven long since 'the airy creatures of the brain.'" After the preliminary note of warning to the eager followers after new truths, we confess that this sneer at dusty old conservatism was quite unlooked for, and we read with eagerness the following pages to determine more fully the tendencies of the author. It soon becomes evident, however, that he too is fired by the spirit of the times, for he argues earnestly, nay, even passionately, in favor of the use of the speculum, denying that these examinations "tear down the barriers which hedge in chastity, and thus, by blunting virtuous sensibility, open the flood-gates of vice." In fact, he unites "with the poor woman who has gone to a doctor for many a long year without being asked to submit to the indignity of a speculum examination, in characterizing the whole proceeding by which she has been relieved of her money as a *swindle*." These are bold words, in these timid, cautious times, when the opposition to the use of the speculum is so strong; but still we read on, assured at least that we shall find, in the hundreds of recorded cases, clinical histories accompanied by careful vaginal examinations, and this alone would make any work on the diseases of women of great value. Can we help, then, expressing a sense of surprise on finding that of forty-one recorded cases taken at random, in only fourteen was any examination made? For a moment we were disposed to judge the author harshly; but, turning to the chapter on the "specula matricis," and seeing the entire absence of any but the oldest forms of the instrument (we do not wish to be understood as *literally* referring to the valvular speculum, incrustated with Pompeian ashes, which now lies in the Museo Borbonico at Naples), a feeling of pity rather than anger came over us. The rules for deportment when introducing the instrument are, however, so terse and admirable that we cannot refrain from quoting them in part, at least. The manner must be "calm, dignified, and positive," but at the same time "easy, collected, and business-like," avoiding on the one hand "familiarity, questionable stories, and a dash of vulgarity," and, on the other, "sickly sentimentalism and mock modesty." The chapter on the anatomy and physiology of the uterus presents, undeniably, points of interest. For instance, the valuable addition to our knowledge is modestly stated in a line or two, that during "the menstrual act" "an elimination of certain noxious principles from the circulation takes place from the utricular glands;" while the uterus is described as "an embryonic hollow muscle, which in the non-gravid state is formed of connective tissue, in which is interspersed a great number of fibre-cells, that under the physiological stimulus of pregnancy are developed into involuntary non-striated muscular fibres;" while "the erectile coat of the vagina (!) in extreme cases of benign disease becomes the seat of a chronic stasis of blood, a state analogous to priapism." Dr. C. objects to the inaccuracy of the term chronic metritis, and insists upon a seven-fold division of the subject, commencing with congestion of the cervical canal and uterine catarrh, and ending in an ascending grade with a definition which none but those possessed of a most retentive memory could successfully grasp. As an illustration of the facility with which this refined diagnosis can be made by one trained to his work by "more than two or three hours' daily practice for more than seven years," numerous cases are given, the points of similarity in which are so striking that their place in the new nosology is at once evident. Take, for instance, two cases of "congestion of the inner cervix."

Case XLIV.—J. S., single. Examination, none. Symp-

toms: menses regular, but light-colored and scanty; weakness in back and over hips; tenderness in front; burning, itching sensations in vagina; leucorrhœa copious. Duration, five months. Cause, unknown. Treatment, none. Result, made one visit.

Case XCII.—C. M., married five years. Examination, none. Symptoms: menses return every fourteenth day, free and painful; weakness in back; no leucorrhœa; no forcing, dragging feelings in pelvis. Duration, three months. Cause, unknown. Treatment, none. Result, made one visit.

The symptoms here evidently point to but one condition, and an examination is clearly useless, while the wise friends of the patients could not fail to congratulate them at least on the happy uniformity of the result. But it is useless to quote further. A volume of five hundred pages is made up of statements and clinical histories of which those which we have just given can fairly be taken as representative cases, and when the tired reader fancies that he has reached the end of the work, he finds, in ambuscade, a summary of treatment, with aphorisms and tabulated cases, where the most incongruous points of resemblance have been taken as a basis, and statistical results reached which, like the book itself, are meaningless and worthless.

THERMIC FEVER, OR SUNSTROKE. By H. C. WOOD, JR., M.D. Philadelphia, J. B. Lippincott & Co.

This little book, while showing considerable research, seems to us to present many assailable points in its argument. The author, assuming Morehead's division of cases into "cardiac, cerebro-spinal, and mixed," explains the "cardiac" by the sudden coagulation of the myosin of the heart; while (p. 58) he says, "I feel forced to accord assent to the proposition that thermic and post-mortem rigidity are alike due to the coagulation of a plasma in the muscles."

Now, why so summarily dismiss the view of Vallin, that coagulation of the diaphragmatic myosin is the cause of death in the so-called "cardiac" or rapidly fatal cases? for, by his own experiments, the respiration was primarily affected, as a rule, and the heart often continued pulsating to the last. Moreover, he admits that the diaphragm is at the centre of highest bodily temperature, and it appears to us a question whether the heart could attain to the temperature of the diaphragm, unless the blood were hotter than the tissues. The author, however, dismisses the whole theory by one experiment, No. 3, p. 43, in which the diaphragm of a cat responded somewhat after death to the galvanic current.

Again, why should, in any case, death result from coagulation of the myosin of the *left* ventricle, when venous is hotter than arterial blood?

The author takes the ground that heat, and heat alone,—heat from without,—is the cause of the destructive action; not heat generated by disease or by nerve-centre lesion. In this connection it would be of the greatest interest to know whether there is ever a post-mortem rise of temperature in death from the effects of heat, as occurs in cholera,—wherein also are found early rigor mortis, ante-mortem spasm, and acid reaction of the muscular tissue,—and in tetanus; but we find no mention of it in this book. For evidence, however, that such post-mortem rise does occur, see Wunderlich, "Medical Thermometry," p. 131.

On p. 83 the conclusion is reached, that the nervous symptoms of sunstroke are due to the "direct action of the heat on the cerebro-spinal axis, and that death itself by asphyxia is brought about by the same influence." The only objection which seems of weight to the author, viz.: that death is secondarily produced through the medium of a congested brain, he answers by "three facts," which we will examine seriatim.

1. "Sudden epileptiform convulsion is not generally the result of congestion of the brain." True; but exceptionally it might be, and this is a particular case, viz.: sunstroke.

2. "Opening the skull through the longitudinal sinus . . . did not stop the convulsion." But the convulsive action, once set up, is not always at once arrested by removal of the cause.

3. "Abstraction of the heat by pouring of cold water over the head sufficed to produce immediate cure." Here the grave question arises, Can we abstract heat from the deeper

tissues so immediately as to immediately cure?—though, by the way, three out of the four animals so cured died shortly afterwards. If we correctly remember some experiments reported by Dr. S. Weir Mitchell to the Pathological Society some years ago, heat was not so easily abstracted from the deeper tissues, though reflex contraction followed the sudden cooling of the skin; in which view, if *cure* did follow the “pouring of cold water,” it would manifestly be due to the relief, by reflex contraction in the cerebral circulation, of that congestion the existence of which the author denies.

On pages 84 and 85, the author, while opposing Richardson's view of capillary spasm, will be found to assert—if his somewhat involved and clumsy sentences be paraphrased into straightforward English, and the ingenious puzzle in which he has involved himself be solved for him—that capillary spasm cannot exist, because the pupils in the comatose stage are contracted. But on page 19, in referring to the many cases which he has himself seen, all in the comatose stage, he says, “The pupils sometimes dilated, sometimes nearly normal, sometimes contracted.” But such little inconsistencies are not at all rare; as, in describing the condition of the blood (page 98), he says it is “similar to that seen in low fevers;” while on page 89 he asserts, “The blood has not lost its vitality; . . . it is not dead;” and again, page 20, “Petechiæ and ecchymoses, the evidences of broken-down blood, were present in some of my cases; . . . in one or two instances, even, a foetid hemorrhagic exudation from the nostrils during life.”

On page 89, the remarkable absence of oxygen in the blood of heat-stroke is noted, and explained by “oxidation under the influence of high temperature.” But the no less remarkable want of increase in the carbonic acid, as shown by his adduced analyses, is unnoticed; and we would like to see it satisfactorily accounted for. Surely, if by oxidation the oxygen disappeared, by the same action the carbonic acid should have increased.

It seems to us, after reading page 100, that there remains yet something unaccounted for. For we know that in certain occupations far higher temperatures than that of our summer are often endured without the symptoms of heat-stroke; and exhaustion in such occupations must occur in a cool part of the year, to possess any significance.

Pages 100–102. There seems some uncertainty here; for, while asserting previously that direct heat, and heat only, is the cause of sunstroke, the author so far shifts his ground as to say, “Until the stimulus of the heat becomes so intense as to paralyze either the heat centre or the vaso-motor nerves; . . . and then there is probably a sudden intensifying of the oxidation processes, and a further rise in temperature” (our own italics). Here the principle for which the author has been contending is given up. The assertion contained in the italics we have already answered by his own quoted blood-analyses, and so ask, Where is the proof?

In connection with the author's case of typhoid fever, page 101, reference might well have been made to the series of cases reported by Hermann Weber, “Trans. Clin. Soc. Lond.,” vol. i., on “Sudden death from the nerve-centres in rheumatic fever, with excessive temperature before death,” and “Lesion of the cervical portion of the spinal marrow, exhibiting the phenomena of heat-stroke,”—cases bearing the most curious and complete likeness to heat-stroke, even in the minutiae of symptoms and post-mortem appearances. These cases alone, had they come within his notice, might well have deterred our author from such bold yet conflicting assertions as are to be met with throughout his book.

On page 100, speaking of the application of cold, he says that if it be applied “before it” (heat) “has produced permanent injury to the nervous system, blood, or other tissues,” the animal recovers. But how are we in the human subject to tell when these destructive effects occur? Unfortunately, by his testimony, destruction has preceded the most excessive rise of temperature.

That the experiments narrated in this book did not develop true heat-stroke is evident, especially the “hot-bonnet” series. True, the unfortunate animals died, and came up to the standard in certain post-mortem conditions; but where were the prodromes? What intimate connection is there between an animal baked or boiled to death, and such cases as those

referred to of Dr. Barclay, on page 14, where he says, speaking of his Indian experience, “Although the air became cooler, . . . yet seven more fatal cases occurred in three days,” and the many cases occurring at night?

In treatment, our author has nothing new to offer, though mentioning what many may not know,—the hypodermic injection of morphia, as suggested by Dr. Herbert Norris and recommended by Dr. J. H. Hutchinson, and the inhalation of chloroform; unless we are to consider as original the combination of the two last procedures in convulsive cases. Might not sulphuric ether prove equally useful, while less likely to overwhelm the already embarrassed heart?

Here we must stop, having many more things to say, but no space in which to say them, with a recommendation that every one should read this book for himself, containing as it does the collected views of many, and opening up afresh an ever-interesting subject.

THE TREATMENT OF VENEREAL DISEASES: A MONOGRAPH ON THE METHOD PURSUED IN THE VIENNA HOSPITAL, UNDER THE DIRECTION OF PROF. VON SIGMUND: INCLUDING ALL THE FORMULÆ. By M. H. HENRY, M.D., Surgeon to the New York Dispensary, Department of Venereal and Skin Diseases, etc. Adapted and arranged from the German. 8vo, pp. 49. New York: William Wood & Co., 1872.

This book, most valuable as an exhibit of the pharmacology of one of the soundest authorities on venereal diseases, is so concise in its style as hardly to admit of analysis. Two or three points may, however, be noted. One is, the great simplicity of the 198 formulæ, the great majority of which contain but one substance, with a vehicle. Another is, the comparatively prominent place given to mercury in the treatment of true syphilis, while the iodide of potassium is assigned “a back seat.” We note also that this latter remedy is several times directed to be made up into pills; and that its local employment, in combination, is approved of.

On p. 19 we observe (Formula No. 30) that gr. v of muriate of morphia in fʒij of distilled water—and on p. 20 (Formula No. 31), that gr. j of sulphate of atropia in the same bulk of water—are “to be used hypodermically.” Does this mean the whole at one injection? We have been in the habit of using one-fourth to one-half grain of morphia, and of feeling our way cautiously with one-eightieth to one-fiftieth grain of atropia; and it seems as if there must be a misprint or an omission in our author's directions, especially as narcotics are elsewhere very sparingly dealt with.

We think Dr. Henry has done a great service in putting this little volume forth. It is only by means of the collation of many views, if at all, that the true therapeutics or the true pathology of venereal diseases can be arrived at; and so far, we have perhaps followed too implicitly the French oracles.

A MANUAL OF QUALITATIVE ANALYSIS. By ROBERT GALLOWAY, F.C.S., Professor of Applied Chemistry in the Royal College of Science for Ireland, etc. etc. From the Fifth re-written and enlarged London Edition. With Illustrations. Small 8vo, pp. 402. Philadelphia, Henry C. Lea, 1872.

This small and unpretending work is in the highest degree practical in its character. Its author, aiming, as he says, “to furnish a suitable guide to the beginner,” has done more; since he has provided an excellent hand-book for those who are only occasionally called upon to make chemical analyses. Many physicians will be very glad to have just such a volume on their shelves.

BOOKS AND PAMPHLETS RECEIVED.

The Principles and Practice of Surgery. By Frank Hastings Hamilton, A.M., M.D., LL.D., Professor of the Practice of Surgery with Operations, and of Clinical Surgery, in Bellevue Hospital Medical College, etc. etc. Illustrated with 467 Engravings on Wood. 8vo, pp. 943. New York, William Wood & Co., 1872.

The Treatment of Syphilis with Subcutaneous Sublimated Injections. By Dr. George Lewin, Professor at the Fr. Wilh. University, etc. Translated by Carl Proegler, M.D., and E. H. Gale, M.D. 8vo, pp. 249. Philadelphia, Lindsay & Blakiston, 1872.

On the Functional Diseases of the Renal, Urinary, and Reproductive Organs, with a General Review of Urinary Pathology. By D. Campbell Black, M.D., L.R.C.S. Edin., etc. etc. 8vo, pp. 300. Philadelphia, Lindsay & Blakiston, 1872.

The Magnetic and Mineral Springs of Michigan; to which is prefixed an Essay on the Climate of Michigan. By Stiles Kennedy, M.D. 8vo, pp. 127. Wilmington, Del., James & Webb, 1872.

President's Address before the South Carolina Medical Association Meeting held in Columbia, April, 1872. Yellow Fever in Charleston, 1871, with Remarks upon its Treatment. By Francis Peyre Porcher, M.D. (From Transactions of the Association.) 8vo, pp. 30. Charleston, S.C., Walker, Evans & Cogswell, 1872.

Clinical Observations on the Dementia and the Hemiplegia of Syphilis. By M. H. Henry, M.D., etc. (Reprint from the Amer. Journ. of Syphilography and Dermatology, January, 1872.) 8vo, pp. 15. New York, F. W. Christern, 1872.

GLEANINGS FROM OUR EXCHANGES.

INFLUENCE OF THE MIND UPON THE BODY.—In an article in the *Journal of Mental Science* for July, 1872, by Dr. Daniel H. Tuke, we find the following:

"The rejection of the contents of the stomach from a purely mental state is well exemplified in an experiment made upon one hundred patients in a hospital, and reported by Dr. Durand (de Gros) in his able work '*Essais de Physiologie philosophique*.' The house surgeon administered to them such inert draughts as sugared water; then, full of alarm, he pretended to have made a mistake in inadvertently giving them an emetic, instead of syrup of gum. The result may easily be anticipated by those who can estimate the influence of the imagination. No fewer than eighty-four-fifths—were unmistakably sick. How many of the rest suffered from nausea is not stated. We need not approve of the deception of the *infirmier*; but, the experiment having been made, it is a pity so many people should have been rendered miserable without good use being made of their discomfort. In regard to misleading patients generally even *causâ scientiæ*, one of the practical difficulties which the investigation into the influence of the imagination presents, certainly is the unseemliness of making experiments of this nature, and the danger of sullying that strict honor which by no profession is more prized or maintained than by the professors of the medical art.

"The most trivial matter attaches certain ideas to certain places, persons, and especially articles of dress, to which they cling with a tenacity which is truly surprising, unless the influence of the association of ideas and the automatic action of the brain be considered; and when the image called up is disagreeable, it will haunt the mind grievously, and may at last cause acts over which the will has no longer any control, and which are those of a madman. Locke calls the association of ideas a disease of the understanding, and it may certainly prove as mischievous in inducing bodily and mental diseases, as it is pernicious in the employment of the reasoning powers and the search after moral truth.

"Van Swieten says, 'I have seen a man who had taken a sufficiently nauseating draught, not only shudder and be nauseated, but also be frequently purged, when he merely saw the cup in which he had taken the medicine;' and adds, '*Sic sola idea fastidiosi remedii renovata purgantis pharmaci vices supplevit, et totum corpus turbavit.*' He compares this to our thinking of sadness, or even feeling sad, when we merely see the word sadness, although it has only an arbitrary connection with it.

"The efficiency of an ideal purgative in exciting the peristaltic action of the intestines has been already incidentally referred to; the following case well illustrates it, and is the more valuable from being the personal experience of a medical man:

"Dr. S. all his life had the greatest horror of taking medicine, although fully admitting the beneficial and necessary

effects of it, and constantly prescribing it judiciously for others; he consequently never took it. After a certain period of life, however, he began to experience a torpidity of the bowels and all the consequent uneasiness, rendering it apparent to himself that relief could only be obtained by the means he prescribed to his patients,—namely, the taking of medicine. After due deliberation, accordingly, and conflict with himself, he decided upon taking some, and, imagining that an ordinary dose of salts would answer all the purpose, and be less nauseous than most others, he carefully mixed one and laid it by his bedside at night to be taken in the morning when he first awoke. The proximity of it, however, and the impression on his mind of the horrible dose which awaited his first waking, banished sleep from his eyes, and kept it continually before him. At length, however, he did sleep, and even then the vision did not leave him, but, like the haunting phantom of the roasting pig to the slumbering glutton, it assumed various guises and positions to his mind, the difference alone being that his was more purely imaginary, as he had not swallowed the cause of the mental disturbance, which the other had; but suffered from the anticipation. At length, however, he awoke, and, so far from requiring the prepared medicine, found all occasion for it removed by an effort of nature; and from that time he declares that he has nothing to do when suffering from torpid bowels but to lay a dose by his bedside at night, and that it as effectually acts as if he had swallowed it.' ('*Medical Essays*,' by Dr. Sealy, p. 64)."

THE ANTISEPTIC METHOD IN SURGERY.—Dr. Paul Güterbock, of Berlin (*Archiv für klinische Chirurgie*, xii. 2, 1872; *Schmidt's Jahrbücher*, No. 2, 1872), discusses fully the advantages and disadvantages of Lister's dressing. To the argument used by Professor Lister against his opponents that his method has never been closely followed by them, it is a sufficient answer that he himself, since his first contribution on this method, has modified it in many different ways. Of chief consequence in this method is always the local use of carbolic acid, which produces cauterization following immediately on the injury, and continued for some time. This is proved by the early contributions of Professor Lister on this subject. For this reason German surgeons have not practised the prophylactic washing out of wounds with irritant fluids, and have latterly used carbolic acid in diluted forms. Even by diluting it, and by using lac plaster, the caustic action of carbolic acid is not quite removed. Likewise, when one carries out a plan seldom resorted to by Professor Lister, and places pieces of lint, dipped in olive oil, between the wound and the carbolic paste, the caustic action of the carbolic acid cannot be altogether avoided, as this agent may flow from the paste, and become mixed with the olive oil. In the more recent modifications of Lister's process, the caustic action is not so intense as it would be if applied according to the early methods. In all, however, one circumstance has to be considered, namely, that after the first cauterization with the acid, the tissue-detritus thus produced forms a crust, which ought not to be removed. The eschar formed by carbolic acid does not extend very deeply, and the cauterization with this acid of wounds which have been attacked by hospital gangrene or by diphtheria has the disadvantage, that after it the surgeon cannot determine with precision the extent of the disease, since the pulpy surface of a wound in a case of hospital gangrene very much resembles an eschar produced by the action of carbolic acid. The differential diagnosis can only be obtained by constant watching, by the general condition of the patient, and by other phenomena presented in the parts about the wound. Wounds treated with carbolic acid have but a slight tendency to heal, as has been acknowledged by Professor Lister himself, who has, in order at last to favor cicatrization, substituted for the antiseptic dressing some other application. This action of the antiseptic method Dr. Güterbock can confirm by his own experience. As after cauterization with carbolic acid the eschar is but slowly detached, there is but a slight tendency to inflammatory reaction, and the wound is tardy in healing. The carbolic acid does not in every case give rise to the formation of eschars; when such are not present there is superficial mortification of the tissues. This condition may be suspected when granulations secrete but little, and when there is a tendency in the capillaries to bleed, and

no progress towards healing. In a case of this kind, reported by Dr. Güterbock, all these symptoms disappeared as soon as chlorate of potash had been substituted for the carbolic acid in the dressings.

This tendency to hemorrhages was observed by Dr. Güterbock in wounds treated according to Lister's method, before these had reached the stage of granulation. A special objection to Lister's method is its hindrance to healing by primary intention, which may be caused by the use of a 1 to 30 solution.

After a prolonged application of carbolic acid, excoriations and eczema appear in the neighborhood of the wound, which lesions, although they have no influence on the course of the disease, are yet very obstinate. Dr. Güterbock, after an operation for pseudarthrosis, performed according to Dieffenbach's method, in which a solution of carbolic acid (1 to 20) was used, observed that eczema persisted for some twenty-four weeks after the healing of the wound. In one case erysipelas occurred as the result of excoriations of this kind. Such instances, however, are but seldom observed. All these results, which are referred to the caustic action of carbolic acid, present in but a small number of cases any contra-indication against the use of the agent, and in the majority do not interfere with the favorable progress of wounds. But the method does not perform all that Professor Lister praises it for. In most of the cases observed by Dr. Güterbock the carbolic acid treatment did not answer to the favorable reports made on it, and imparted no protection against hospital maladies.

To prove this assertion, Dr. Güterbock brings forward thirteen tabulated cases of compound fracture, which, in the course of eighteen months, had been treated according to Lister's method. None of these cases ended fatally; in three the wound was very small; in the remaining ten cases all those bad symptoms were presented which distinguish compound, in opposition to simple, fractures, and erysipelas and hospital gangrene occurred. Of these cases there were but few which presented, at the first, any certain indications for amputation, and such cases did not become more favorable under the influence of Professor Lister's treatment. An actively favorable influence and a protective action against hospital diseases could not be attributed to Professor Lister's plan of dressing in any one case.

Dr. Güterbock reports the following case, which, according to Lister, would be denoted as one of acute traumatic necrosis:

A man, aged twenty-nine years, received the kick of a horse over the right shin-bone, which caused a wound about one inch in length in the inner surface of the leg, extending through the soft parts, and exposing the bone. On the day after the accident there was much swelling of the injured limb, and intense fever. Incisions were then made down to the bone, and the paste and oily solution of carbolic acid were then applied instead of the previously-used simple dressing. The patient progressed favorably, and at the end of a month was discharged. No exfoliation of bone took place.

Dr. Güterbock would not attribute this favorable result of this case to Lister's method, as limited injury and exposure of long bones are often healed by other plans of treatment, and here the antiseptic method was not properly or solely carried out.

Dr. Güterbock has not been able to convince himself of any striking advantage attending the antiseptic method in the opening and subsequent treatment of congestive abscesses. In his opinion, the favorable results obtained by Joseph in the Leipsic clinique are only seemingly opposed to this position, since in these cases no favorable influence upon the primary affection could be made out.

Relatively favorable results have been obtained by Dr. Güterbock in the treatment of wounds and acute suppuration of joints and serous cavities. In four cases of affections of the knee-joint, he did not lose a single patient, and in all instances there was recovery with fair mobility of the limb. The same good results were obtained in two cases of suppuration of the mucous bursa over the olecranon, attended with high fever. Lesions of this kind, Dr. Güterbock allows, may be treated with success by the antiseptic method. He does not, however, inject carbolic acid into wounded joints. He has obtained similar good from the antiseptic treatment of

injuries of tendinous sheaths, but has not succeeded with this method in cases of phlegmon and acute suppuration.

Dr. Güterbock has not found that the use of carbolic acid improves, as it has been stated to do by Professor Lister and his followers, the sanitary condition of hospitals. Since the hygienic conditions of the Berlin hospital have been altered, the results of treatment have been better, although Lister's method has been but seldom practised.

The statistical proofs brought forward by Professor Lister with regard to the small number of fatal cases after amputation and resection do not prove the exclusive value of his method, since at the Berlin hospital, at a time when Professor Lister's treatment was not heard of, just as good results were obtained as those placed to the credit of the antiseptic method. Differences in the results of treatment, such as those in the Glasgow Royal Infirmary and the hospital at Berlin, are quite independent of the antiseptic plan of treatment. It is difficult to answer even the question whether the number of such favorable cases has been much increased by the use of Professor Lister's method.

As a positive result of his inquiries, Dr. Güterbock concludes that Professor Lister's dressing is constantly followed by injurious results, chiefly due to the caustic action produced by every form of its application, whilst the advantages of the method are obtained only under quite favorable conditions, and with the concurrence of especially favorable circumstances, for which reason they, in themselves, are not to be undervalued. To this method is especially applicable the remark of Stromeyer, that many things seem to act as anti-phlogistics that prevent the access of air and the fingers of the surgeon.

STRANGULATED HERNIA REDUCED BY TAXIS AFTER PUNCTURE OF THE INTESTINE.—At a meeting of the Académie de Médecine, held May 21, 1872 (*Jour. de Méd. et de Chir. Prat.*, June, 1872), M. Demarquay exhibited a young man in whose case the operation was attempted of puncturing the strangulated loop of the intestine, and removing the liquid and gas contained therein. The patient, who had been the subject of a congenital inguinal hernia, having passed the day in company with his family at Versailles, had become quite fatigued, and in the course of the evening was seized with severe abdominal pains, attended with vomiting. At the same time, he became aware of the presence of a swelling of considerable volume in the left groin. As the pain and vomiting still continued on the following day, a physician was summoned, who advised his immediate removal to the hospital, where he was admitted at 6 P.M. Here the tumor appears to have been subjected to a pretty vigorous manipulation by the *interne* on duty, who, failing to effect a reduction, contented himself with making an application of ice. The patient passed a wretched night, and on the following day the symptoms were all aggravated. The tumor had now increased in volume and become elongated, so as to rest in immediate contact with the testicle. M. Demarquay, not having previously met with very good success in operating for strangulated hernia, attempted to effect a reduction by means of taxis, but without any result. He then decided to remove the liquid and gas contained in the intestine. A small trochar was therefore introduced into the centre of the tumor, and the liquid contents of the strangulated portion of the gut entirely drawn off by the aid of the *aspirateur*. In this manner about 120 grammes of liquid were withdrawn, besides a considerable amount of gas. The swelling at once subsided completely. The trochar was then withdrawn, and the intestine left to itself for a few moments, in order to see if additional liquid and gas would find its way into the loop, and thus cause the swelling to return. As there was no indication that the intestine would be refilled, a very slight amount of pressure was applied to the seat of the tumor, which at once caused the strangulated intestine to withdraw into the abdominal cavity. The patient was confined in bed for several succeeding days, and kept under the influence of small doses of opium. He made an excellent recovery, without exhibiting any subsequent symptoms, with the sole exception of inflammation of one testicle, the result of the repeated manipulations to which he had been subjected. This operation of puncturing the intestine to facilitate reduction by taxis has now been attended with favorable results in several instances, and is worthy, therefore, of a trial in those cases in

which sufficient time has not already elapsed to allow of mortification.

In the following number of July are published two additional cases of strangulated hernia successfully treated according to the method of Demarquay above described, by puncture and pneumatic aspiration, and reported by Dr. Chauveau, of Courtelain.

NEW REAGENT FOR BLOOD.—H. Struve (*Zeitschr. f. Anal. Chem.*, 1872) found that the coloring-matter of blood is best precipitated in the following manner: To the liquid containing blood, a little ammonia or caustic potassa is added, then a solution of tannin, and finally acetic acid, until the reaction is distinctly acid. The dark-colored precipitate, tannate of hæmatin, subsides rapidly, is easily collected, washed and dried, and yields, when treated with sal-ammoniac and glacial acetic acid, the well-known hæmin crystals.

20 c.c. of urine containing 0.023 per ct. of blood yielded an abundant precipitate sufficient for many experiments for hæmin.

A SOURCE OF ERROR IN THE ESTIMATION OF SUGAR WITH FEHLING'S SOLUTION.—D. L. Brunner (*ib.*) has found that some kinds of filtering-paper are very appreciably dissolved by alkaline solutions of copper; he therefore recommends to ascertain this behavior of the copper solution for each lot of filtering-paper, or to convert the cuprous oxide obtained in the process into cupric oxide.

MISCELLANY.

By an act of the British Parliament, just passed, it is ordained that no person shall use or employ, in any manufactory or any other place, any steam whistle or steam trumpet for the purpose of summoning or dismissing workmen or persons employed, without the sanction of the sanitary authority, and every person offending shall be liable to a penalty not exceeding five pounds, and to a further penalty not exceeding forty shillings for every day during which such offence continues. The act is not to extend to Scotland.

RELATION OF WEATHER TO COLLIERY EXPLOSIONS.—A careful collation of meteorological records for given localities and the explosions from fire-damp in coal-mines in Europe, has shown that there is a very close relationship between the two, and that alterations in the meteorological condition are proximately the cause of most colliery accidents. Out of 550 given explosions investigated, it is thought that 266 may be attributed to the state of the barometer, and 123 to that of the thermometer, while the remaining 161 were unaccounted for on meteorological grounds: thus, 70 per cent. of the whole were directly related to meteorological influences. It is suggested that special care should be exercised in mines after a fall of the barometer, although the explosions in most cases do not occur until several days after the depression has reached its minimum. The greatest number of accidents are said to occur when a serious storm follows a long period of fair weather. Elevation of temperature, of course, greatly interferes with the natural ventilation of a colliery; and hence, if a warm day occur in a cold season, when natural ventilation is relied upon, it is very likely to be followed by an explosion. For a like reason the first hot days of spring are quite often marked by colliery accidents.

SUPERSTITION IN ENGLAND.—"At last week's meeting of the Wigan Board of Guardians," says the *London Echo*, "a case was brought forward relating to an extraordinary superstition in Lancaster. The assistant overseer of Ashton-in-Makerfield had sent to the Wigan Workhouse a woman who gave the name of Catherine Collins, and who had been sitting

all day on a door-step, and was wholly destitute. She stated that she had come out of the Salford Workhouse, on leave, to have 'the holy hand' applied to her paralyzed side. Mr. Clarke, one of the guardians for Ashton, stated to the board that hundreds of persons visited the township for similar purposes. The holy hand is kept by the Roman Catholic priest at Garwood, in Ashton township, and is preserved with great care in a white silk bag. Many wonderful cures are said to have been wrought by this saintly relic, which is alleged to be the hand of Father Arrowsmith, a priest who is said to have been put to death for his religion at Lancaster. When about to suffer, he desired his spiritual attendant to cut off his right hand, which should then have power to work miraculous cures on those who had faith to believe in its efficacy. The story of the unbelievers is that Arrowsmith was found guilty of a foul crime, and that the tale of his martyrdom and miraculous attestation to the truth, for which he suffered, was contrived for the purpose of preventing scandal upon the Church. The hand was formerly kept at Bryn Hall, now demolished, the ancient seat of the Gerard family, the present representative of which, Sir Robert Gerard, resides at Garwood."

A CORRESPONDENT of the *Daily News*, at Rome, reports an extraordinary occurrence at Torre del Greco. The Bishop of Ischia, a native of the place, recently died there. As his body was being conveyed to the cemetery,—just, indeed, as it was about to enter the gates,—messengers hurriedly came from the town to announce that the dead prelate was working miracles. The lame had been made to walk, the dumb to speak, and so on. The funeral procession at once turned about, the coffin was carried back to Torre del Greco, and the people along the line of the route were urged to bring forth their sick that they might be restored to health. When the corpse was at length deposited in the church, so convinced were the crowd that the miraculous powers of the deceased attached to every shred of his clothes, that they soon stripped the dead body of all its ecclesiastical vestments, and left it entirely naked. It was in vain that the church dignitaries endeavored to restore order. The people would not listen. At last the church-bells began to ring violently. The crowd rushed out to inquire the cause, the building was closed, and soon after troops came and prevented all further disturbance.

A QUEER STORY was told in the *Paris Figaro*, the other day, which, whether true or not, is worth reproducing. A very respectable pharmacien in Paris, we are informed, by name M. D——, announced some time ago that he was prepared to embalm dead bodies. About six months since, a carriage drove up, and a young gentleman got out and entered the pharmacy. He was well dressed, and very sorrowful. He had lately lost his father, and had brought with him the corpse to have it embalmed. The pharmacien undertook the task, and informed his visitor that two days would be required; at the expiration of which time the young gentleman was to call again. The body was embalmed with sulphate of alumina and various spices and perfumes, and the two days passed, but the young gentleman did not return. Day after day went by; and when a fortnight had elapsed M. D—— comprehended that he had been swindled. As a desperate manœuvre he then placed the embalmed corpse in his window, and labelled it

MOMIE DE RAMESES IV.
ROI D'EGYPTE.

It was not long before this extraordinary curiosity attracted,

as a customer, M. le Baron de C——, who was tempted to add a Pharaoh to his museum. But this nobleman's astonishment may be imagined, when, examining the mummy, he recognized his old friend M. de L——. The pharmacien confessed the truth, and tried to lay all the blame on the well-dressed youth who had so ingeniously avoided funeral expenses. But M. le Baron was not to be deceived again. It was a well-known fact that the young gentleman had absconded, and here there seemed tolerably conclusive proof that he and the pharmacien were accomplices in a most repulsive swindle. M. D—— was therefore arrested at the instance of the Baron, and—there the story closes for the present.

A LUCRATIVE PRACTICE.—The *Boston Medical and Surgical Journal* says that it is stated on good authority that Sir William Gull, of Guy's Hospital, London, has the most lucrative practice of any living physician, his professional income last year being estimated at £25,000.

SINGULAR SUICIDE OF A PHYSICIAN.—On the 23d of August, Dr. Jewett, of North Haven, Me., liberally educated, but a very eccentric old man, went into his office, emptied a can of kerosene about the room, severed the femoral artery in both his thighs, and set fire to his house.

The neighbors, seeing the flames, ran to the scene, and found the old man, with a single garment on, in the midst of the fire, and weltering in his blood. They dragged him out, but he was past speech, and died immediately. He had no family, and lived alone.

BELGIAN PHARMACOPŒIA.—By a decree of the King of the Belgians, dated 27th of February, a commission has been instituted of professors of the medical sciences to revise the official code of that country, and Drs. Crocq, Chandelon, Depaise, Gille, and Lesebre have been named as members of the committee.

AN enthusiastic writer in the *London Telegraph*, of August 10, asks, "What was the might of Achilles, after all, with his brutal strength and coarse valor, to the fine, subtle, compact fighting-power crystallized in the *pia mater* of Adolphe Thiers?"

Perhaps he meant *pineal gland*.

FEMALE MEDICAL OFFICER.—Miss S. J. Williams, M.D., has been appointed city physician by the corporation of Springfield, Massachusetts.

THE GERMAN UNIVERSITY AT STRASBOURG.—According to the *Lancet*, the Faculty of Medicine of this institution is almost completely organized. Prof. Hering, of Prague, has lately been appointed (the chair not stated); also the following: Professors Oscar Schmidt, of Grätz (zoology), Waldeyer (anatomy), Hoppe-Seyler (physiological chemistry), Von Recklinghausen (morbid anatomy), Schmiedeberg (materia medica), Leyden (medicine), Lücke (surgery), Gusserow (midwifery and diseases of children), Von Krafft-Ebing (mental diseases), Laqueur (ophthalmology).

Cohnheim, whose researches are so well known, goes to Breslau, to take the chair vacated by Professor Waldeyer.

HONOR TO A SURGEON.—We see it stated that the Japanese government has sent swords of honor as complimentary gifts to a number of the distinguished officers of the German army, and among the rest one to the surgeon-general, Dr. Grimm.

SINGULAR, IF TRUE.—We find the following in one of the daily papers:

"A Swiss gymnast, who, like some orators, made his living by his powerful jaw, recently came to grief during a performance. On this occasion he took a barrel of flour in his teeth, and attempted, with no other aid, to throw it over his head. His teeth stood the strain, but his spinal column was not equal to the occasion, and became dislocated, from which the unfortunate man died."

BLOOMINGDALE ASYLUM.—So many complaints have been made in regard to this institution, that Governor Hoffman has appointed a Commission to investigate its affairs. The only medical member of the Commission is Dr. Hun, of Albany.

ACQUITTAL OF SCHOEPPE.—The jury in this case on its second trial, after a consultation of fifteen minutes, brought in a verdict of not guilty, and the prisoner was at once discharged.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending	
	Aug. 31.	Sept. 7.
Consumption	37	37
Other Diseases of Respiratory Organs	11	19
Diseases of Organs of Circulation	10	12
Diseases of Brain and Nervous System	50	49
Diseases of the Digestive Organs	21	19
Diseases of the Genito-Urinary Organs	15	6
Zymotic Diseases	20	21
Cholera Infantum	50	26
Casualties	16	14
Cancer	5	7
Marasmus	26	25
Old Age	11	9
Stillborn	9	17
Suicide	1	1
Sunstroke	2	0
Murder	1	1
Unclassifiable	37	38
Unknown	1	1
Totals	323	302
Adults	133	131
Minors	190	171

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM AUGUST 19, 1872, TO SEPTEMBER 4, 1872, INCLUSIVE.

MOORE, JNO., SURGEON.—By S. O. 159, Department of the East, August 21, 1872, granted leave of absence for twenty days.

ALDEN, C. H., SURGEON.—By S. O. 71, Department of the Lakes, August 5, 1872, relieved from duty at Fort Gratiot, Michigan, and assigned to duty at Fort Porter, N.Y.

NOTSON, WM. M., ASSISTANT-SURGEON.—By S. O. 73, Department of the Lakes, August 7, 1872, assigned to duty at Fort Mackinac, Michigan.

TREMAINE, W. S., ASSISTANT-SURGEON.—By S. O. 142, Department of the Missouri, August 29, 1872, granted leave of absence for fifteen days.

JESSOP, S. S., ASSISTANT-SURGEON.—By S. O. 133, Department of the Missouri, August 17, 1872, assigned to duty with 6th U. S. Cavalry, in camp near Fort Hays, Ks.

CARVALLO, C., ASSISTANT-SURGEON.—By S. O. 195, War Department, A. G. O., August 22, 1872, to report in person to the Commanding General, Department of the Lakes, for assignment.

By S. O. 201, War Department, A. G. O., August 29, 1872, the following changes are made:

KINSMAN, J. H., ASSISTANT-SURGEON.—Relieved from duty in Department of the South, and to report in person to the Commanding General, Department of Dakota, for assignment to duty.

YEOMANS, A. A., ASSISTANT-SURGEON.—Relieved from duty in Department of the Gulf, and to report in person to the Commanding General, Department of the East, for assignment to duty.

MATTHEWS, W., MUNN, C. E., EVEN, CLARENCE, ASSISTANT-SURGEONS.—Relieved from duty in Department of Dakota, to proceed to New York City and report, upon arrival there, by letter to the Surgeon-General.

SEMPLE, J. E., ASSISTANT-SURGEON.—Died during August, 1872, while en route to Department of the Gulf.

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